

DEVELOPING STRATEGIES FOR EFFECTIVE UTILIZATION
OF GEOGRAPHY BROADCAST PROGRAMMES FOR GRADE-VII

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(Nature's Zoo)

Overview

In this lesson, students will learn about the location, boundary and climate of Africa alongwith the types of birds and animals living in it that have made Africa a Nature's Zoo.

Form of Broadcast: Students-Teacher Discussion.

(The teacher takes her students to a Zoo. After seeing different kinds of birds and animals, she discusses the topic with her students).

CONTENT SEQUENCE:

- 1 Africa is the second biggest continent of the world after Asia.
- 2 (i) On the boundaries of Africa, Mediterranean sea and Europe are on the north, Asia and Indian Ocean are on the east and Atlantic Ocean is in the west. Asia is separated from Africa by the Red Sea and Suez Canal.
(ii) The equator, tropic of Cancer and the tropic of Capricorn passes through central, northern and southern Africa respectively.
- 3 (i) The climate remains hot throughout the year in most of the parts of Africa because those areas come under the tropical region.
(ii) As the north-east trade winds from Asia are land winds, they do not bring rain to the northern part of Africa.
(iii) The south-east trade winds from the Indian Ocean bring rains to the south-east Africa.
- 4 (i) Due to lack of rain in the northern Africa, Sahara desert has been formed.
(ii) South-east trade winds are blocked by the Drakensberg mountains, as a result of which Kalahari desert has been formed in its rain shadow area.
(iii) Long grass fields are formed in the rain shadow area of Drakensberg due to scanty rain. This area is called 'Veldt'.
(iv) Dense forests are seen in the Congo river valley and Guinea area due to heavy rains.
(v) The long grass fields in the Zambezi valley is called "Savanna". Countries like Kenya, Tanganyika, Rhodesia have Savanna grass lands.
(vi) As the equator passes through the middle of Africa, when there is summer in the southern region, there is winter in the northern region and vice versa.

- 5 The continent of Africa is called the "Nature's Zoo" as peculiar birds and animals are seen there.
 - (i) Camel is called the "Ship of Desert in Sahara".
 - (ii) Ostrich breeding is a profitable business in the Kalahari desert area.
 - (iii) In 'Veldt', animals such as sheep, cattle, horses etc. are domesticated due to the availability of sufficient grass.
 - (iv) Gorillas, chimpanzies, monkeys, snakes etc. live in the dense forest areas of Congo river valley and Guinea. Also poisonous flies named 'Tsetse' live there, at the bite of which man dies.
 - (v) Deer, giraffe, zebra, elephant, rhino etc. grass eaters and lions, wolf, etc. wild animals live in 'Savanna'. This is called the "Hunter's Paradise" because many animals are found there.
- 6 (i) Muslims of Arabic and Hemite sect live in Misser and Ethiopia region.
 - (ii) Underdeveloped black Africans live in Sudan and Savanna regions. They live on agriculture and farming.
 - (iii) Dwarfs named 'Pygmy' live in the Congo river valley area. They live on hunting and collecting fruits from the forest.
 - (iv) Bushmen live in the Kalahari desert area.
- 7 Africa was called the "Dark Continent" as it was away from civilised world for a long period.

EXPECTED TERMINAL BEHAVIOURS

Pupils will be able to

- 1.1 write in order the two largest continents of the world.
- 2.2 recognise that Africa has been separated from Europe by the Mediterannian sea in the north, and from Asia by the Red sea and Suez Canal.
- 2.3 recognise that Atlantic ocean and Indian ocean are respectively in the west and east of Africa.
- 2.4 locate the equator, tropic of Cancer, the tropic of Capricorn Sahara and Kalahari on the map of Africa.
- 3.5 reason out why in most parts of Africa the climate remains hot throughout the year.
- 3.6 point out the regular winds, their differences and effects of these winds on rainfall.
- 4.7 give reason for the formation of Kalahari and Sahara desert.
- 4.8 recognise the mountain by which the south east trade wind is blocked.
- 4.9 give reason to the long-grass fields in the rainshadow area of Drekenberg and dense forests of Congo and Savanna.

- 4.10 give the meaning of 'Veldt'.
- 4.11 recognise the countries and places having Savanna grass land.
- 4.12 differentiate the nature of climate in terms of seasons both in the southern and northern Africa.
- 5.13 give reason to why Africa is called the 'Nature's Zoo'.
- 5.14 recognise the birds and animals of (i) the deserts, (ii) the 'veldt' area, (iii) Savanna grass land and (iv) dense forests of Africa.
- 5.15 recognise the name of the place called 'Hunter's Paradise'.
- 6.16 tick out the inhabitants (tribes and sects) of Misser, Ethiopia, Savanna, Congo river valley and Kalahari desert area.
- 6.17 recognise the means of living of those tribes and sects.
- 7.18 explain why Africa is called the 'Dark Continent'.

CRITERION TEST

- 1.1.1 Write in order the two largest continents of the world.
- 2.2.2 Africa has been separated from Europe by the
- (i) Red sea ()
 - (ii) Mediteranean sea ()
 - (iii) Suez Canal ()
 - (iv) Red sea and Suez canal ()
- 2.2.3 Africa has been separated from Asia by the
- (i) Suez Canal ()
 - (ii) Mediteranean sea ()
 - (iii) Suez Canal and Red sea ()
- 2.3.4 _____ ocean is on the west of Africa.
- 2.3.5 _____ ocean is on the east of Africa.
- 2.4.6 Locate the following on the map of Africa:
- (i) Equator, (ii) Tropic of Cancer, (iii) Tropic of Capricorn, (iv) Sahara, (v) Kalahari.
- 3.5.7 In most of the parts of Africa, the climate remains hot throughout the year because
- (i) those parts are in the tropical region. ()
 - (ii) those parts are in the rain shadow area. ()
 - (iii) Monsoon winds blow throughout the year. ()
- 3.6.8 In the northern part of Africa, rain is not possible because
- (i) south-east trade winds coming from Indian ocean are dry. ()
 - (ii) north-east trade winds coming from the land side of Asia are dry. ()
 - (iii) the trade winds are blocked by the Drekenberg mountain. ()
- 3.6.9 Rain is possible in south-east Africa because of
- (i) south-east trade winds from Indian ocean. ()
 - (ii) north-east trade winds from Asia. ()
 - (iii) south-east trade winds from Atlantic. ()
 - (iv) north-east trade winds from Sahara. ()

- 3.6.10 Differentiate between the north-east trade wind and the south-east trade wind in Africa.
- 4.7.11 Explain, how Sahara desert has been formed.
- 4.7.12 Explain, how Kalahari desert has been formed.
- 4.8.13 The south-east trade winds are blocked by the
- (i) Sahara desert ()
 - (ii) Drekenberg Mountains ()
 - (iii) Dense forests in Savanna ()
 - (iv) Congo river valley ()
- 4.9.14 In the rain shadow area of Drekenberg, long grass fields are seen because
- (i) there is less rain in the summer. ()
 - (ii) there is no rain in the summer. ()
 - (iii) there is heavy rain in the summer. ()
- 4.9.15 Dense forests are seen in the Congo river valley areas of Africa, because of
- (i) scanty rain ()
 - (ii) heavy rain ()
 - (iii) no rain ()
- 4.10.16 Write the meaning of 'Veldt'.
- 4.11.17 Pick out the names of the places belonging to Savana
- (i) Kalahari () (iii) Kenya ()
 - (ii) Suez () (iv) Sahara ()
 - (v) Rhodesia ()
- 4.11.18 Which area of Africa is included in Savana
- (i) Congo river valley ()
 - (ii) Zambezi river valley ()
 - (iii) Drekenberg ()
- 4.12.19 Differentiate the nature of climates in terms of seasons both in the southern and northern Africa.
- 5.13.20 Why is Africa called the "Nature's Zoo"?
- 5.14.21 Ostrich breeding is a profitable business in
- (i) Sahara desert ()
 - (ii) Kalahari desert ()
 - (iii) Savana area ()
 - (iv) 'Veldt' area ()

- 5.14.22 _____ is called the ship in Sahara.
(Mamoth, Elephant, Camel, Ostrich)
- 5.14.23 Which of the following animals are seen in the
"Veldt" area?
- | | | | | | |
|-------|------------|-----|--------|--------|-----|
| (i) | Lion | () | (v) | Goat | () |
| (ii) | Chimpanzee | () | (vi) | Snakes | () |
| (iii) | Tsetse fly | () | (vii) | Sheep | () |
| (iv) | Monkey | () | (viii) | Horse | () |
- 5.14.24 Pick out the names of animals living in Savanna.
- | | | | | | |
|-------|-------|-----|--------|---------|-----|
| (i) | Dear | () | (v) | Cows | () |
| (ii) | Tiger | () | (vi) | Monkeys | () |
| (iii) | Rhino | () | (vii) | Zebra | () |
| (iv) | Wolf | () | (viii) | Ostrich | () |
- 5.14.25 Pick out the animals living in the forests of Congo
river valley.
- | | | | | | |
|-------|---------|-----|------|---------|-----|
| (i) | Zebra | () | (iv) | Gorilla | () |
| (ii) | Snakes | () | (v) | Monkey | () |
| (iii) | Ostrich | () | (vi) | Camel | () |
- 5.14.26 Man dies by the bite of the fly named_____.
- 5.15.27 _____ is called the "Hunters' Paradise".
(Veldt, Savanna).
- 6.16.28 In Misser and Ethiopia, people of _____ tribe
live in. (Hemite, Bushmen, Pygmy)
- 6.16.29 In Sudan and Savanna _____ people live in.
(Hemite, Pygmy, Black Africans, Arabic).
- 6.16.30 Dwarfs living in Congo river valley are called_____.
- 6.16.31 A tribe named _____ live in Kalahari desert area.
(Bushmen, Hemite, Pygmy)
- 6.17.32 In Savanna people live on
- | | | |
|-------|-------------------------------|-----|
| (i) | hunting. | () |
| (ii) | fruits collecting from forest | () |
| (iii) | agriculture and farming | () |

6.17.33 Pygmies live on

- (i) Hunting () (ii) Collecting fruits ()
(iii) Fishing () (iv) Both hunting and collecting
fruits from forests ()

7.18.34 Why was Africa called the "Dark Continent"?

(Items are to be arranged according to the item
types and be ready for test with necessary
instruction.)

ଆକାଶବାଣୀ

ବିଦ୍ୟାଳୟ କାର୍ଯ୍ୟକ୍ରମ

ମାନ ନିର୍ଦ୍ଧାରଣ ପରୀକ୍ଷା

ବିଷୟ : ପ୍ରକୃତିର ଚିତ୍ତିଆଖାନା

ନାମ :

ରୋଲ ନଂ :

ତାରିଖ :

ସମସ୍ତ ପ୍ରଶ୍ନର ଉତ୍ତର ଦିଅ

୧। ନିମ୍ନରେ କେତେଗୁଡ଼ିଏ ପ୍ରଶ୍ନ ଏବଂ ସେ ଗୁଡ଼ିକର ସମ୍ଭାବ୍ୟ ଉତ୍ତର ଦିଆଯାଇଛି, ତୁମେ ଯେଉଁଟିକୁ ଠିକ୍ ଉତ୍ତର ବୋଲି ଭାବୁଛ, ତାହାର ଡାହାଣ ପଟ୍ଟରେ ଥିବା ବ୍ୟବସାୟ ମଧ୍ୟରେ (✓) ଚିହ୍ନ ଦିଅ ।

(କ) ଆପ୍ତିକା ମହାବେଶ ଇନ୍ଦ୍ରୋପ ମହାବେଶଠାରୁ କାହାଦ୍ୱାରା ବିଚ୍ଛିନ୍ନ ହୋଇଛି ?

(୧) ଲୋହିତ ସାଗର ()

(୨) ଭୂମଧ୍ୟ ସାଗର ()

(୩) ସୁପନ୍ନ କେନାଲ ()

(୪) ଲୋହିତ ସାଗର ଓ ସୁପନ୍ନ କେନାଲ ()

(ଖ) ଆପ୍ତିକା ମହାବେଶ ଏସିଆ ମହାବେଶଠାରୁ କାହାଦ୍ୱାରା ବିଚ୍ଛିନ୍ନ ହୋଇଛି ?

(୧) ସୁପନ୍ନ କେନାଲ ()

(୨) ଭୂମଧ୍ୟ ସାଗର ()

(୩) ସୁପନ୍ନ କେନାଲ ଓ ଲୋହିତ ସାଗର ()

(ଗ) ଆପ୍ତିକାର ଅଧିକାଂଶ ଅଂଚଳରେ ଜଳବାୟୁ ବର୍ଷସାରା ଉଷ୍ମ ଋତୁବାର କାରଣ କଣ ?

(୧) ଉଚ୍ଚ ଅଂଚଳ ଗୁଡ଼ିକ ଉଷ୍ମ ମଣ୍ଡଳର ଅନ୍ତର୍ଗତ ()

(୨) ଉଚ୍ଚ ଅଂଚଳ ଗୁଡ଼ିକ ବୃଷ୍ଟିକ୍ଷାୟୀ ଅଂଚଳର ଅନ୍ତର୍ଗତ ()

(୩) ବର୍ଷସାରା ଏଠାରେ ମୋସୁମୀବାୟୁ ପ୍ରବାହିତ ହୁଏ ()

(ଘ) ଆପ୍ତିକାର ଉତ୍ତରାଂଶରେ ବର୍ଷାହେବା ସମ୍ଭବପର ହୁଏ ନାହିଁ କାହିଁକି ?

(୧) ଭାରତ ମହାସାଗର ଆଡ଼ ପ୍ରବାହିତ ଦକ୍ଷିଣ-ପୂର୍ବ ଆୟୁନବାୟୁ ଶୁଷ୍କ ଅଟେ ()

(୨) ଏସିଆ ଉପକୂଳର ପ୍ରବାହିତ ଉତ୍ତର-ପୂର୍ବ ଆୟୁନବାୟୁ ଶୁଷ୍କ ଅଟେ ()

(୩) ଆୟୁନବାୟୁ ଡ୍ରୋକେନୁପବର୍ଗ ପର୍ବତ ଶ୍ରେଣୀଦ୍ୱାରା ବାଧା ପାଇ ରହିଯାଏ ()

- (୧୩) ବକ୍ସିଣ-ପୂର୍ବ ଆଫ୍ରିକାରେ କାହାଦ୍ୱାରା ବର୍ଷା ସମ୍ବନ୍ଧରେ ହୁଏ ?
- (୧) ଭାରତ ମହାସାଗର ଆଡୁ ପ୍ରବାହିତ ବକ୍ସିଣ-ପୂର୍ବ ଆୟୁନ ବାୟୁ ଦ୍ୱାରା ()
- (୨) ଆଟଲାଣ୍ଟିକ ମହାସାଗର ଆଡୁ ପ୍ରବାହିତ ବକ୍ସିଣ -ପୂର୍ବ ଆୟୁନବାୟୁ ଦ୍ୱାରା ()
- (୩) ଏସିଆ ଉପକୂଳରୁ ପ୍ରବାହିତ ଉତ୍ତର-ପୂର୍ବ ଆୟୁନ ବାୟୁ ଦ୍ୱାରା ()
- (୪) ସାହାରାଆଡୁ ପ୍ରବାହିତ ଉତ୍ତର-ପୂର୍ବ ଆୟୁନ ବାୟୁ ଦ୍ୱାରା ()
- (୧୪) ଆଫ୍ରିକାକୁ ପ୍ରବାହିତ ବକ୍ସିଣ-ପୂର୍ବ ଆୟୁନ ବାୟୁ କାହାଦ୍ୱାରା ବାଧାପ୍ରାପ୍ତ ହୁଏ ?
- (୧) ସାହାରା ମରୁଭୂମି ()
- (୨) ସାହାରାର ଘନ ଅରଣ୍ୟ ()
- (୩) ଡ୍ରୋକେନ୍ସବର୍ଗ ପର୍ବତ ()
- (୪) କଙ୍ଗୋ ଅବବାହିକା ()
- (୧୫) ଡ୍ରୋକେନ୍ସବର୍ଗର ବୃଷ୍ଟିଛାୟା ଅଂଚଳରେ ଦିପ୍ତିର୍ଣ୍ଣ ପ୍ରାନ୍ତର ବେଖାଯିବାର କାରଣ କଣ ?
- (୧) ଗ୍ରୀଷ୍ମ କାଳରେ ଏଠାରେ ମିଳେ ବୃଷ୍ଟି ହୁଏ ()
- (୨) ଗ୍ରୀଷ୍ମ କାଳରେ ଆଦୌ ବୃଷ୍ଟି ହୁଏ ନାହିଁ ()
- (୩) ଗ୍ରୀଷ୍ମ କାଳରେ ଅତ୍ୟଧିକ ବୃଷ୍ଟି ହୁଏ ()
- (୧୬) କେଉଁଠାରେ ଓଡ଼ିଆ ଯାଜନ ଏକ ଲାଭ ଜନକ ବ୍ୟବସାୟ ?
- (୧) ସାହାରା ମରୁଭୂମି ()
- (୨) କଳାହାରୀ ମରୁଭୂମି ()
- (୩) ସାହାରା ଅଂଚଳ ()
- (୪) ଫେଲ୍ଡ ଅଂଚଳ ()
- (୧୭) ଆଫ୍ରିକାର କେଉଁ ଅଂଚଳ ସାହାରାର ଅନ୍ତର୍ଗତ ?
- (୧) କଙ୍ଗୋନଦୀର ଅବବାହିକା ()
- (୨) ଜାମ୍ବେଜି ନଦୀର ଅବବାହିକା ()
- (୩) ଡ୍ରୋକେନ୍ସବର୍ଗର ବୃଷ୍ଟିଛାୟା ଅଂଚଳ ()
- (୧୮) ସାହାରା ଅଂଚଳରେ ଆଦିବାସୀମାନେ କିପରି ଜୀବିକା ନିର୍ବାହ କରନ୍ତି ?
- (୧) ଶିକାର କରି ()
- (୨) ପଶୁ ପାଳନ କରି ()
- (୩) ବଣରୁ ଫଳମୂଳ ସଂଗ୍ରହ କରି ()

(୫) ପିତୃମାନେ କିପରି ସେମାନଙ୍କର ଜୀବିକା ନିର୍ବାହ କରନ୍ତି ?

(୧) ମାଛ ଧରି ()

(୨) ବଣର ଫଳମୂଳ ସଂଗ୍ରହ କରି ()

(୩) ଶିକାର କରି ()

(୪) ଉଭୟ ଶିକାର କରି ଓ ଫଳମୂଳ ସଂଗ୍ରହ କରି ()

(୬) କଂଗୋ ଏବଂ ସାଭାନା ଅଞ୍ଚଳରେ ଘନ ଅରଣ୍ୟ ଦେଖାଯିବାର କାରଣ କଣ ?

(୧) ଏହି ସବୁ ଅଞ୍ଚଳରେ ଖୁବ୍ କମ୍ ବର୍ଷା ହୁଏ ()

(୨) ଏହି ସବୁ ଅଞ୍ଚଳରେ ଅତ୍ୟଧିକ ବର୍ଷା ହୁଏ ()

(୩) ଏହି ସବୁ ଅଞ୍ଚଳରେ ଆଦୌ ବର୍ଷା ହୁଏ ନାହିଁ ()

୨୧ ନିମ୍ନ ପୁସ୍ତକ ଗୁଡ଼ିକର ଉତ୍ତର ସଂକ୍ଷେପରେ ଦିଆଯାଇଥିବା ସ୍ଥାନ ମଧ୍ୟରେ ଲେଖ :-

(କ) ଅଗ୍ନିକାଳ କାହିଁକି ପ୍ରକୃତିର ଚିତ୍ତିଆଖାନା କୁହାଯାଏ ?

(ଖ) ପାହାରି ମରୁଭୂମି ସୃଷ୍ଟି ହେବାର କାରଣ କଣ ?

(ଗ) ଜଳାହାରୀ ମରୁଭୂମି ସୃଷ୍ଟି ହେବାର କାରଣ କଣ ?

(ଘ) 'ଫେଲ୍ଡ୍' କାହାକୁ କହନ୍ତି ?

(ଙ) ଅଗ୍ନିକାର ଦକ୍ଷିଣ-ପୂର୍ବ ଆୟନବାୟୁ ଏବଂ ଉତ୍ତର-ପୂର୍ବ ଆୟନବାୟୁ ମଧ୍ୟରେ ପ୍ରଭେଦ କଣ ?

(ଚ) ଉତ୍ତର ଅଗ୍ନିକା ଓ ଦକ୍ଷିଣ ଅଗ୍ନିକାର ଜଳବାୟୁ ମଧ୍ୟରେ ପାର୍ଥକ୍ୟ କଣ ?

(ଛ) ଅଗ୍ନିକା ମହାଦେଶକୁ କାହିଁକି ତମସାଛନ୍ତି ମହାଦେଶ ବୋଲି କୁହାଯାଏ ?

(ଜ) ପୃଥିବୀର ଦକ୍ଷିଣ ବୃହତ୍ତମ ମହାଦେଶର ନାମ କୁମାନୁସାରେ ଲେଖ ?

୩୧ ନିମ୍ନ ପୁସ୍ତକଗୁଡ଼ିକରେ ଏକାଧିକ ଠିକ୍ ଉତ୍ତର ରହିଛି, ସେଗୁଡ଼ିକ ପାଖରେ (✓) ଚିହ୍ନ ଦିଅ ।

(କ) ନିମ୍ନଲିଖିତ ଜୀବଜନ୍ତୁମାନଙ୍କ ମଧ୍ୟରୁ କେଉଁଗୁଡ଼ିକ 'ଫେଲ୍ଡ୍' ଅଞ୍ଚଳରେ ଦେଖାଯାନ୍ତି ?

(୧) ସିଂହ () (୪) ବିଷଧର ସର୍ପ ()

(୨) ସିଂପାଜି () (୬) ଛୁଲି ()

(୩) ସେଟେ () (୭) ମେଣ୍ଟା ()

(୪) ବାନର () (୮) ଗୋଞ୍ଜ ()

(ଖ) ନିମ୍ନଲିଖିତ ଜୀବଜନ୍ତୁମାନଙ୍କ ମଧ୍ୟରେ କେଉଁ ଗୁଡ଼ିକ କଂଗୋନଦୀର ଅବବାହିକାରେ ଥିବା ଜଂଗଲରେ ବାସ କରନ୍ତି ?

- | | | | |
|------------|-----|-------------|-----|
| (୧) ଜେବ୍ରା | () | (୪) ବାନର | () |
| (୨) ଗରିଲା | () | (୫) ଓଟପକ୍ଷୀ | () |
| (୩) ସର୍ପ | () | (୬) ଓଟ | () |

(ଗ) ନିମ୍ନଲିଖିତ ସ୍ଥାନ ଗୁଡ଼ିକ ମଧ୍ୟରୁ କେଉଁ ଗୁଡ଼ିକ ସାରାମାର ଅନ୍ତର୍ଗତ ?

- | | | | |
|--------------|-----|-----------------|-----|
| (୧) କଜାହାରୀ | () | (୪) ଟାଂଗାନୀୟିକା | () |
| (୨) କେନିଆ | () | (୫) ସାହାରା | () |
| (୩) ଇଥ୍‌ଓପିଆ | () | (୬) ରୋଡେସିଆ | () |

(ଘ) ନିମ୍ନଲିଖିତ ଜୀବମାନଙ୍କ ମଧ୍ୟରୁ କେଉଁ ଗୁଡ଼ିକ ସାରାମା ଅଂଚଳରେ ବାସ କରନ୍ତି ?

- | | | | |
|----------|-----|--------------------|-----|
| (୧) ହରିଣ | () | (୪) ଜେବ୍ରା | () |
| (୨) ଗୋରୁ | () | (୫) ଭାରନୋ (ଗଣ୍ଡାର) | () |
| (୩) ଗଧ | () | (୬) ସିଂହ | () |

୪। ଶୂନ୍ୟସ୍ଥାନ ପୂରଣ କର :-

- (କ) ଅଗ୍ନିକାର ପଶ୍ଚିମରେ ----- ମହାସାଗର ଅବସ୍ଥିତ ।
 (ଖ) ଅଗ୍ନିକାର ପୂର୍ବରେ ----- ମହାସାଗର ଅବସ୍ଥିତ ।
 (ଗ) ----- ମାଛି କାମୁଡ଼ିଲେ ଜୀବଜନ୍ତୁମାନଙ୍କର ମୃତ୍ୟୁ ହୁଏ ।
 (ଘ) କଂଗୋନଦୀର ଅବବାହିକାରେ ବାସ କରୁଥିବା କାମନମାନଙ୍କୁ ----- କୁହାଯାଏ ।

୫। ବ୍ୟକ୍ତି ମଧ୍ୟରୁ ଉପଯୁକ୍ତ ଶବ୍ଦବାଚି ଶୂନ୍ୟ ସ୍ଥାନ ପୂରଣ କର :-

- (କ) ----- କୁ ସାହାରା ମରୁଭୂମିର ଜାହାଜ କୁହାଯାଏ ।
 (ଓଟ , ହାତୀ , ଓଟପକ୍ଷୀ)
 (ଖ) ----- କୁ ଶିକାରୀର ସ୍ୱର୍ଣ୍ଣ ଆଖ୍ୟା ଦିଆଯାଇଛି ।
 (ଫେଲ୍ଡ , ସାରାମା , ଡ୍ରୋକେନୁସବର୍ଗ)
 (ଗ) ସୁଦାନରେ ବାସ କରୁଥିବା ଅଧିବାସୀମାନଙ୍କୁ ----- କୁହାଯାଏ ।
 (ବସୁମେନ , କିଷୁକାୟ , ଅଗ୍ନିକାୟ , ଆରବିକ)
 (ଘ) ମିଶର ଓ ଇଥ୍‌ଓପିଆର ଅଧିବାସୀମାନଙ୍କୁ ----- କୁହାଯାଏ ।
 (ହାମାରଟ୍ , ପିଗମି , ବସୁମେନ)
 (ଙ) କାଲାହାରୀ ଅଂଚଳରେ ----- ଜାତିର ଲୋକେ ବାସ କରନ୍ତି ।
 (ବସୁମେନ , ପିଗମି , ହାମାରଟ୍)

୬। ଅଗ୍ନିକା ମହାଦେବର ଏକ ମାନତିତ୍ତ୍ୱ ଅଙ୍କନ କରି ନିମ୍ନ ଲିଖିତ ସ୍ଥାନ ଓ ରେଖା ଗୁଡ଼ିକ ବର୍ଣ୍ଣାୟ :-

- (୧) ଦିବ୍ୟ ରେଖା
 (୨) ମକର କ୍ରାନ୍ତି
 (୩) କର୍କଟକ୍ରାନ୍ତି
 (୪) କାଳହାରୀ
 (୫) ସାହାରା

ପ୍ରକୃତିର ବିବିଧତା

- ୧। କ- ୨, ଖ-୩, ଗ-୧, ଘ-୨, ଙ- ୧, ଚ- ୩, ଛ- ୧,
ଜ- ୨, ଝ-୨, ଞ- ୧, ଟ- ୪, ଠ-୨ ।
- ୨। (କ) ବିଭିନ୍ନ ପ୍ରକାରର ଜୀବମାନଙ୍କୁ ବାସ କରୁଥିବାରୁ
(ଖ) ଏହିଆ ପ୍ରାଣୀମାନଙ୍କୁ ଉତ୍ତରପୂର୍ବ ଆୟନବାୟୁ ଗୁଣ୍ଠ ହୋଇ ଥିବାରୁ ଉତ୍ତର
ଆଫ୍ରିକାରେ ବର୍ଷା ସମୟରେ ବୃଦ୍ଧ ନାହିଁ ।
(ଗ) ବର୍ଷା ପୂର୍ବ ଆୟନବାୟୁ ଡେକେମ୍ବରର ପର୍ବତ ଦ୍ଵାରା ବାଧାପ୍ରାପ୍ତ ହୁଏ ।
(ଘ) ଡେକେମ୍ବରର ବର୍ଷାଦିନ ଆଫ୍ରିକାରେ ବର୍ଷା ପ୍ରାନ୍ତରୁ 'ପୋଲ୍‌ବ' କହନ୍ତି ,
(ଓଲ୍‌ବାଜ ଉଷାରେ ପୋଲ୍‌ବ ଅର୍ଥ ପ୍ରାନ୍ତର) ।
(ଚ) ବର୍ଷା ପୂର୍ବ ଆୟନବାୟୁ ଦ୍ଵାରା ବର୍ଷା ସମୟରେ ବୃଦ୍ଧ ।
ଉତ୍ତର ପୂର୍ବ ଆୟନବାୟୁ ଦ୍ଵାରା ବର୍ଷା ସମୟରେ ବୃଦ୍ଧ ନାହିଁ ।
(ଟ) ବର୍ଷା ଆଫ୍ରିକାରେ ଗ୍ରୀଷ୍ମକାଳ ସମୟରେ ଉତ୍ତର ଆଫ୍ରିକାରେ ଶୀତକାଳ ।
(ଠ) ଏହା ବହୁଦିନ ଧରି ସରା ଉତ୍ତର ଦିଗକୁ ଥିଲା ।
(ଡ) ଏହିଆ , ଆଫ୍ରିକା ।
- ୩। (କ) ୨, ୨ , ୮ (ଖ) ୨, ୩, ୪ । (ଗ) ୨, ୪, ୬ (ଘ) ୧, ୪, ୫, ୭
- ୪। (କ) ଆଗଲ୍ୟାକ୍ସିକ , (ଖ) ଭାରତ (ଗ) ସେଣ୍ଟ୍ରାଲ (ଘ) ପିଗ୍ମି ।
- ୫। (କ) ଓଟ , (ଖ) ସାଉନା (ଗ) କୃଷକାୟ ଆଫ୍ରିକୀୟ
(ଘ) ଦ୍ଵାମାଉଟ (ଙ) ବୁଡ୍‌ମେନ୍
- ୬। ବିଷୁବରେଖା
ମକରକ୍ରାନ୍ତି
କର୍କଟ କ୍ରାନ୍ତି
କାଳାହାରୀ
ସାହାରୀ

....

LEARNING EXPERIENCESPRE-BROADCAST ACTIVITIES

Method: Question-Answer.

Aids: 1. The Globe
2. Map of Africa.

Teacher's Activities	Expected Students' Activities
Tr: Hellow, students! you are welcome to the 1st programme of school broadcast on our Geography series. Before listening to the actual broadcast, I will ask you certain questions. Please answer them.	
Q.1 (Showing the globe) What is this?	Globe.
Q.2 What do you find on this globe?	Maps of different countries, continents, oceans etc.
Q.3 How many continents are there in the world?	Seven.
Q.4 Which are they?	Asia, Africa, etc.
Q.5 In which continent are we living?	Asia.
Q.6 Which are our neighbouring continents?	Africa, Europe.
Q.7 Which is the largest continent in the world?	Asia.
Q.8 Which continent is next to Asia in size?	Africa.

(Teacher asks a student to locate Africa on the globe).

Teacher's Activities	Expected Students Activities
Q.9 (Showing the globe).	
In which direction of our country Africa is situated?	West.
(Teacher would hang the map of Africa on the wall).	(Students will point out on the map).
Tr: What do you think about the people there in Africa? Are they like us? Do they live in the manner we are living here?	Yes, they are like us but their way of life is different.
(Teacher would point the above questions to some students in order to indulge the students in thinking).	
Tr: Actually, their way of life is different from ours. Most parts of Africa is filled with dense forests and many peculiar birds and animals. Let us listen to the talk coming through radio on the wild animals of Africa. In the talk you may hear the names of different rivers, mountains, deserts, places, animals, birds, oceans and people in Africa.	
(To one of the students) You please write the names of the rivers.	
(To another) You please write the names of the animals.	
The teacher would assign different students to write the names of different birds, animals, rivers etc. coming through the broadcast.	
Tr: Let us listen to the broadcast. (The teacher would tune the radio).	

ACTIVITIES DURING THE BROADCAST

Method: Radiovision

Aids: Slides of

1. A tiger
2. Ostrich
3. Map of Africa
4. Cattle, goat etc.
5. Cow
6. Camel
7. Dense forest of Congo river valley
8. Chimpanzee
9. Tsetse fly
10. Pygmy man

(Slides to be presented in synchronization with the broadcast)

Teaching Points Through the Radio	Visual
1. Roaring of a tiger.	Slide No.1
x x x	x x
2. Which bird cannot fly but runs like a horse?	Slide No.2
x x x	x x
3. Africa is called "Zoo of the Nature".	Slide No.3
x x x	x x
4. In the veldt sheep, cattle, horse etc. are cultivated.....	Slide No.4 followed by slide No.5
x x x	x x
5. Ostrich breeding is a profitable business.	Slide No.1 (Reprojection)
x x x	x x
6. Camel is called the ship of the desert.	Slide No.6
x x x	x x
7. Dense forests are seen in the Congo river valley area.	Slide No.7
x x x	x x

Teaching Points Through the Radio	Visual
8. Gorilla, Chimpanzee etc. live... x x x	Slide No.8 x x
9. A poisonous fly named Tsetse is seen in..... x x x	Slide No.9 x x
10. In the long grass fields of Savanna deer, zebra, rhino, lion, elephant, etc. are seen x x x	Slide No.10 x x
11. In the Congo river valley, Pygmies live on..... x x x	Slide No.11 x x
12. In the northern region of Africa muslims named "Hemites" live. x x x	Slide No.12 x x
13. In the western Africa black undeveloped Africans live. x x x	Slide No.13 x x

(Photographs of the Slides developed by the Investigator
are given in the following pages)

7



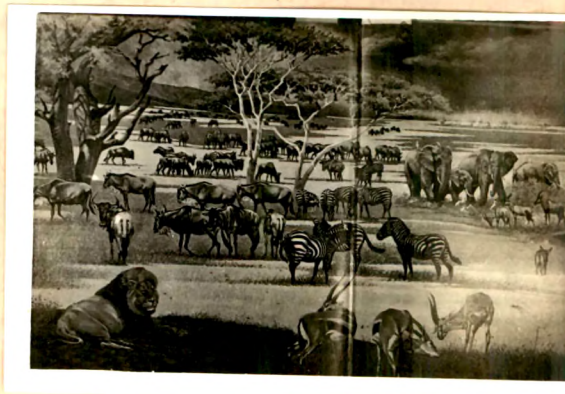
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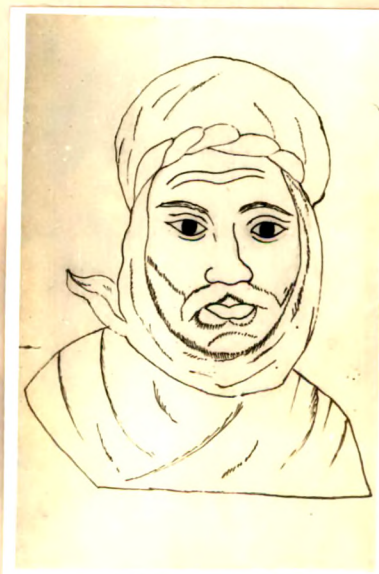
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13



POST BROADCAST ACTIVITIES

Method: Discussion

Aids: 1. Maps of Africa and World
2. Globe.

(The teacher initiates discussion among the students ensuring that most of the students take part in it).

Teacher's Activities	Expected Students' Activities
Q.1 (To one of the students) Where is Africa situated?	Show on the map of world.
Q.2 How is it separated from Europe and Asia?	Varieties of birds and animals are found.
Q.3. Why Africa is called the "Nature's Zoo".	
Q.4 What are the climatic conditions there? (Views to be invited from different corners).	
Q.5 How does it rain in Africa?	Some where it is heavy, some where scanty and at some places no rain.
Q.6 Which are the deserts in Africa?	Sahara, Kalahari (To be shown in the map).
Q.7 How are Sahara and Kalahari deserts formed?	

Teacher's Activities	Expected Students' Activities
Q.8 Which are the animals and birds living in these desert areas?	Ostrich, Camel.
Q.9 Which are the rivers flowing in Africa?	Congo, Zambezi, Guinea
Q.10 What is the vegetation you see in those river belts?	Dense forests.
Q.11 Which are the birds and animals living in those forests? (Discussion to be encouraged).	Gorilla, Chimpanzee Tsetse fly.
Q.12 Where do we find wild animals and why?	Savanna.
Q.13 Where do we find domesticated animals?	Veldt.
Q.14 Who are the inhabitants of Africa?	Arabic, Hemite, Black Africans, Pygmies.
Q.15 Why was Africa called a dark continent?	It was away from the civilized world for a long time.

Tr: We have listened to the talk and discussed it.
Tomorrow we will have test. Read at home and come prepared.

Thank you all.

DEVELOPING STRATEGIES FOR EFFECTIVE UTILIZATION
OF GEOGRAPHY BROADCAST PROGRAMMES FOR GRADE-VII

Title: "KETOTI PRADHAN SILPA -
Louha, Ispat, Bayana, etc."
(Some Important Industries -
Iron, Steel, Textile, etc.)

Overview: Students will learn about the iron, steel,
textile, silk, woolen and jute industries
situated in different parts of the world
with special emphasis on India.

Form of Broadcast:

Discussion - An industrialist discusses
with two of his friends.

CONTENT SEQUENCE

Among the various industries, iron, steel, textile, silk, woolen, jute are of importance.

- 1 (a) Iron is the common metal used by the human community for various purposes like construction of buildings, vehicles, instruments, railway tracks etc.
 - (b) Steel, an alloy of iron and manganese, and is stronger than iron, is used for purposes like manufacture of operative instruments, weapons, utensils, etc.
 - (c) In India, iron and steel industries are established in Tatanagar, Rourkela, Bhilai, Durgapur and Bokaro.
 - (d) Among various countries, America, Russia, Japan, England, France, Italy, West Germany and Belgium have advanced in respect of steel industries.
 - (e) India ranks second among various countries of the world in the deposits of good quality of ironores and seventh in its iron products.
-
- 2 (a) Cotton, the raw material for textile industry is cultivated in black soil. Indians use cotton garments, in plenty as the country comes under hot climate region.
 - (b) In India, the chief centres of textile industries are Sholapur, Nagpur, Ahmedabad, Hubli, Dhabangiri, Bangalore, Coimbatore, Madurai, Amritsar, Kanpur, Choudwar, Calcutta etc. belonging to various states. There are more than 650 textile mills in the country. The first textile mill was established in Bombay in 1854. Before that the raw materials were sent to Great Britain.

- (c) Among the countries of the world, U.S.A., Japan, China, England and Russia have flourished in textile industries. England has flourished even without cultivating cotton. Osaka, in Japan famous for textile industries is called the Manchester of East.
- 3 Silk is prepared from the cocoons of silk worm. Among the countries producing silk: China, Russia, France, Italy and Japan; Japan tops the list. Japan also produces artificial silk from wood and other materials.
- 4 Wool is prepared from fur of the sheep. In India, Srinagar, Amritsar, Ludhiana, Kanpur, Agra, Bangalore, Dharwar, Bikaner, Bellary, etc. are famous for wool industries. Australia stands first in the production of best quality wool in the world.
- 5 Articles like carpets, bags, ropes etc. are produced from jute. There are about 110 jute industries in India. India exports her jute products to U.S.A., Australia, Argentina and Great Britain. Bangladesh is famous in the world in respect of jute products.
- 6 For setting up any industry in Orissa, it is advantageous because of its richness in natural resources. Raw materials like iron ores, manganese, pebbles etc. and fuel and power respectively from Talcher and Heerakund are available in plenty.

EXPECTED TERMINAL BEHAVIOURS

Students will be able to

- 1.1 recognise the name of the metal used by human community more than any other metal.
- 1.2 mention atleast the important uses of iron.
- 1.3 recognise the combination from which steel is produced.
- 1.4 recognise the stronger metal among iron and steel.
- 1.5 mention atleast three important uses of steel.
- 1.6 write the names of three iron and steel plants in India.
- 1.7 recall the name of the iron and steel plant in Orissa.
- 1.8 recognise the names of the countries where steel industry has flourished.
- 1.9 recognise the rank of India in the world in respect of the quality of iron ores.
- 1.10 recognise the rank of India in the world in respect of the iron products.
- 2.11 recognise the name of the soil advantageous for cotton cultivation.
- 2.12 recognise the name of the region having black soil.
- 2.13 recognise the reason for the wide use of cotton garments by Indians.
- 2.14 recognise the names of Indian cities having textile mills.
- 2.15 recognise the names of the Indian states that have advanced in textile industries.
- 2.16 recognise the approximate number of textile mills in India.
- 2.17 recall the place and year of the establishment of the 1st textile mill in India.
- 2.18 recognise the name of the country to which the raw materials were sent before installation of a textile mill in India.
- 2.19 point out the countries advanced in textile industry.

- 2.20 recognise the name of the country where textile industry has flourished even without cultivation of cotton.
- 2.21 recognise two textile mills of England.
- 2.22 recognise the name of a country from where England gets raw cotton.
- 2.23 recognise the purpose for which Liverpool port is used by England.
- 2.24 recognise Osaka as 'Manchester of East'.
- 3.25 recognise the raw material of silk.
- 3.26 write the names of the ^{Chief} Countries producing silk.
- 3.27 recognise the name of the country standing first in silk production.
- 3.28 recognise the material from which artificial silk is produced.
- 3.29 recognise the name of a country producing artificial silk.
- 4.30 recognise the name of the raw material from which wool is produced.
- 4.31 recognise the names of Indian cities famous for woollen products.
- 4.32 recognise the name of the country standing first in wool production.
- 4.33 give the name of the country having best quality of raw wool.
- 5.34 mention the names of two jute products.
- 5.35 recognise the number of jute mills in India.
- 5.36 recognise the name of a country famous for jute industry.
- 5.37 recognise the name of a country to which jute products are exported from India.
- 6.38 recognise the reasons for the vulnerability of Orissa for setting up any industry.
- 6.39 recognise the raw materials available in plenty in Orissa.
- 6.40 recognise the source of fuel and power in Orissa.
- 41 state the name of the industry that they feel most useful to human community and give reasons for it.

CRITERION TEST

- 1.1.1 The metal_____is very much in use by human beings.
(Iron, Gold, Bronze)
- 1.2.2 Mention at least three uses of iron.
- 1.3.3 Where from steel is produced
 (i) from the metal named steel ()
 (ii) from the combination of iron and gold ()
 (iii) from the combination of iron and manganese ()
 (iv) from iron only ()
- 1.4.4 Which is stronger among iron and steel?
 (i) Iron ()
 (ii) Steel ()
 (iii) Both are of equal strength ()
- 1.5.5 What are the uses of steel?
- 1.6.6 Write the names of three iron & steel plants in India.
- 1.7.7 There is an iron and steel plant in_____of Orissa.
- 1.8.8 Which of the following countries have advanced in respect of steel industry?
 (i) Japan () (iv) West Germany ()
 (ii) Ceylon () (v) Belgium ()
 (iii) China () (vi) Pakistan ()
- 1.9.9 The rank of India in respect of good quality of iron ores is_____in the world. (1st, 2nd, 7th)
- 1.10.10 The rank of India in respect of iron products is_____in the world (1st, 2nd, 7th)
- 2.11.11 For cultivation of cotton_____soil is favourable.
- 2.12.12 Which of the following region has black soil?
 (i) Choudwar (Orissa) ()
 (ii) Bangladesh ()
 (iii) Bombay (Maharashtra) ()

- 2.13.13 Why do the Indians use cotton garments in plenty?
Because
- (i) it comes under hot climatic region. ()
 - (ii) it comes under the cold climatic region. ()
 - (iii) cotton garments are produced in plenty. ()
- 2.14.14 In which of the following cities of India there are textile industries?
- (i) Cuttack () (vi) Rourkela ()
 - (ii) Ahmedabad () (vii) Simla ()
 - (iii) Kanpur () (viii) Srinagar ()
 - (iv) Sholapur () (ix) Hyderabad ()
 - (v) Bangalore ()
- 2.15.15 Which of the following states in India have advanced in textile industry?
- (i) Bihar () (v) Assam ()
 - (ii) Madhya Pradesh () (vi) Gujarat ()
 - (iii) West Bengal () (vii) Maharashtra ()
 - (iv) Karnatak ()
- 2.16.16 Approximately how many textile mills are there in India?
- (i) 240 () (ii) 1020 () (iii) 500 () (iv) 650 ()
- 2.17.17 In India, the first textile mill was installed in _____ in the year _____.
- 2.18.18 Where were the raw materials sent before establishment of textile industry in India?
- (i) Russia () (iii) Great Britain ()
 - (ii) America () (iv) China ()
- 2.19.19 Write the names of three countries other than India those who have advanced in textile industry.
- 2.20.20 Which country has advanced in textile industry even without cultivating cotton?
- (i) America () (ii) England () (iii) Australia ()

- 2.21.21 Tick out the names of two textiles mills in England.
(i) Kent () (iii) Manchester ()
(ii) Leedham () (iv) Derbishyre ()
- 2.22.22 Where from England collects raw materials for textile industry?
(i) Misser () (iii) India ()
(ii) China () (iv) Pakistan ()
- 2.23.23 For what purpose England uses Liverpool port?
(i) Exports raw materials ()
(ii) Imports raw materials ()
(iii) Exports textile products ()
(iv) Imports textile products ()
- 2.24.24 _____ is called the Manchester of East.
(Manchester, Osaka, Berlin)
- 3.25.25 Where from silk is produced?
(i) cocoon of silk worm ()
(ii) fur of sheep ()
(iii) fur of cow ()
(iv) cotton ()
- 3.26.26 Write the names of two countries producing silk.
- 3.27.27 Which of the following countries stands first in production of silk?
(i) Australia () (iii) Russia ()
(ii) America () (iv) England ()
- 3.28.28 Artificial silk is produced from _____. (iron, cotton, wood)
- 3.29.29 Which of the following countries produce artificial silk?
(i) India () (iii) China ()
(ii) Japan ()
- 4.30.30 From which material wool is produced?
(i) Cotton ()
(ii) Fur of sheep ()
(iii) Fur of cow ()
(iv) Cocoon of silk worm ()

- 4.31.31 Which of the following cities are famous for wool industries?
- (i) Bhubaneswar () (v) Belari ()
(ii) Nagpur () (vi) Kanpur ()
(iii) Ludhiana () (vii) Hyderabad ()
(iv) Bangalore ()
- 4.32.32 _____ stands first in the world in respect of producing woollen garments. (India, America, Australia).
- 4.33.33 Which country has the best quality of raw wool?
(i) Australia () (ii) Belgium () (iii) India ()
- 5.34.34 Write the names of two jute products.
- 5.35.35 How many jute industries are there in india?
(i) Approx.150 () (ii) Approx.50 () (iii) Approx.110 ()
- 5.36.36 Which of the following countries is famous for jute industries?
(i) Bangladesh () (ii) America () (iii) China ()
- 5.37.37 To which country jute products are exported from India?
(i) Pakistan () (ii) Australia ()
(iii) West Germany () (iii) Argentina ()
- 6.38.38 Orissa is volunerable for establishment of any industry because
(i) ~~Or~~ a good number of industrialists are there. ()
(ii) Orissa is rich in her finance. ()
(iii) Orissa is rich in her natural resources. ()
(iv) Many industries are there. ()
- 6.39.39 Which of the following raw materials are available in plenty in Orissa?
(i) Cotton () (iv) Wool ()
(ii) Iron ore () (v) Manganese ()
(iii) Pebles ()

6.40.40 What are the main sources of fuel and power in Orissa?

- (i) Steel from Rourkela ()
- (ii) Electricity from Hirakund ()
- (iii) Coal from Talcher ()
- (iv) Petroleum from Bay of Bengal ()

41.41 Which of the industries that you have read is most useful to us?
Why?

(Tests to be arranged according to the types of items).

ଆ କା ଶ ବା ଶୀ

ବିଦ୍ୟାଳୟ କାର୍ଯ୍ୟକ୍ରମ

ମାନ ନିର୍ଦ୍ଧାରଣ ପରୀକ୍ଷା

ବିଷୟ : କେତୋଟି ପ୍ରଧାନ ଶିକ୍ଷା

ନାମ :

ରୋଲ ନଂ :

ତାରିଖ :

ପ୍ରମୁଖ ପ୍ରଶ୍ନର ଉତ୍ତର ଦିଅ

୧। ଶୂନ୍ୟ ସ୍ଥାନ ପୂରଣ କର :-

- (କ) କପା ତାଏ ପରି ----- ମୃତ୍ତିକା ସୂକ୍ଷ୍ମା ଜନକ ।
- (ଖ) ଭାରତରେ ପ୍ରଥମେ ଲୁଗାକଳ ----- ଠାରେ ----- ମସିହାରେ ପ୍ରତିଷ୍ଠିତ ହୋଇଥିଲା ।
- (ଗ) ମାନବ ସମାଜଦ୍ୱାରା ----- ଧାତୁ ବହୁଳ ପରିମାଣରେ ବ୍ୟବହୃତ ହୁଏ ।
(ଲୌହ, ସ୍ୱର୍ଣ୍ଣ, ତମ୍ବା)
- (ଘ) ଓଡ଼ିଶାର ----- ଠାରେ ଏକ ଲୌହ ଓ ଉତ୍ପାତ କାରଖାନା ଅଛି ।
- (ଙ) ଉତ୍ତମ ଲୁହାପଥର ଉତ୍ପାଦନକାରୀ ବେଶ ହିସାବରେ ଭାରତର ସ୍ଥାନ ପୃଥିବୀରେ ----- ।
(୧ମ , ୨ୟ , ୩ୟ)
- (ଚ) ଲୁହା ନିର୍ମିତ ପଦାର୍ଥ ଉତ୍ପାଦନରେ ଭାରତର ସ୍ଥାନ ପୃଥିବୀରେ ----- ।
(୧ମ , ୨ୟ , ୩ୟ)
- (ଛ) ----- କୁ ପ୍ରାଚ୍ୟର ମାନୁଷ୍ୟେଷ୍ଟର କହୁନ୍ତି ।
(ମାନୁଷ୍ୟେଷ୍ଟର , ଓସାକା , ଜାପାନ)
- (ଜ) କୃତ୍ରିମ ରେଶମ ----- ରୁ ପ୍ରସ୍ତୁତ ହୁଏ । (ଲୁହା , ଲୁଗା , କାଠ)
- (ଝ) ପଶମ କପ୍ଡ ଉତ୍ପାଦନରେ ----- ପୃଥିବୀରେ ପ୍ରଥମ ।
(ଭାରତ , ଆମେରିକା , ଅଷ୍ଟ୍ରେଲିଆ)

୨। ଠିକ୍ ଉତ୍ତରଟି ପାଖରେ (✓) ଚିହ୍ନ ଦିଅ :-

- (କ) ଯେ କୌଣସି ଶିଳ୍ପ କାରଖାନା ପ୍ରତିଷ୍ଠା ଦିଗରେ ଓଡ଼ିଶା ଏକ ପ୍ରକୃଷ୍ଟ ଉଦାହରଣ ।
କାରଣ : (୧) ଏଠାରେ ବହୁତ ଶିଳ୍ପ ପତି ଅଛନ୍ତି । ()
(୨) ଏଠାରେ ପ୍ରଚୁର ଅର୍ଥ ଅଛି । ()
(୩) ଓଡ଼ିଶା ପ୍ରାକୃତିକ ସମ୍ପଦରେ ଭରପୁର । ()
(୪) ଏଠାରେ ବହୁତ ଶିଳ୍ପ କାରଖାନା ଅଛି । ()

(ଖ) ଇସ୍ପାତ କେଉଁଥିରୁ ତିଆରି ହୁଏ ?

(୧) ଟୁଲୋ ନାମକ ଏକ ଧାତୁରୁ ()

(୨) ଲୁହା ଓ ସୁନାର ମିଶ୍ରଣରୁ ()

(୩) ଲୁହା ଏବଂ ମାଗାନିଜର ମିଶ୍ରଣରୁ ()

(୪) କେବଳ ଲୁହାରୁ ()

(ଗ) ଲୁହା ଏବଂ ଇସ୍ପାତ ମଧ୍ୟରୁ କିଏ ଶକ୍ତିଶାଳୀ ?

(୧) ଲୁହା ()

(୨) ଇସ୍ପାତ ()

(୩) ଉଭୟଙ୍କ ଶକ୍ତି ସମାନ ()

(ଘ) ଭାରତୀୟମାନେ କାହିଁକି ବହୁଳ ଭାବରେ ସୁତା ତିଆରି ବସ୍ତ୍ର ବ୍ୟବହାର କରନ୍ତି ?

(୧) ଭାରତ ଉଷ୍ମ ଜଳବାୟୁର ଅନୁର୍ଗତ ହୋଇଥିବାରୁ ()

(୨) ଏଠାରେ ଅତ୍ୟଧିକ ଗରମ ହୁଏ

(୩) ଏହା ଶୀତଳ ଜଳବାୟୁର ଅନୁର୍ଗତ ହୋଇଥିବାରୁ ଏଠାରେ ପ୍ରବଳ ଅଶ୍ରୁ ହୁଏ । ()

(୩) ସୁତା ବସ୍ତ୍ର ବହୁଳ ପରିମାଣରେ ଉତ୍ପାଦିତ ହୁଏ ()

(ଙ) କେଉଁ ଅଂଚଳ କୃଷକମାନଙ୍କ ମୂଲିକାର ଅନୁର୍ଗତ ?

(୧) ଡରହାମ୍ (ଓଡ଼ିଶା) ()

(୨) ବଂଗଳା ଦେଶ ()

(୩) ବମ୍ବେ (ମହାରାଷ୍ଟ୍ର) ()

(ଚ) ଭାରତରେ ଲୁଗାକଳ ପ୍ରତିଷ୍ଠିତ ହେବା ପୂର୍ବରୁ କଂଚାମାଲ କୁଆଡ଼େ ଯାଉଥିଲା ?

(୧) ଇଣ୍ଡିଆ ()

(୨) ଆମେରିକା ()

(୩) ଗ୍ରେଟବ୍ରିଟେନ ()

(୪) ଚୀନ ()

(ଛ) ଇଂଲଣ୍ଡରେ ଥିବା ୨ଟି ଲୁଗାକଳର ନାମ କିଏ :-

(୧) କେଟ ()

(୨) ଲିଥାମ୍ ()

(୩) ମାଟେବ୍ଲର ()

(୪) ଡର୍ବିସାୟାର ()

- (ଜ) ଇଈଶ୍ଵର ଲିଙ୍ଗରୂପର ବ୍ୟବହାର କିପରି କରାଯାଏ ?
- (୧) କଂଚାମାଲ ସବୁ ଦିବେଶକୁ ପଠାଏ ()
- (୨) କଂଚାମାଲ ସବୁ ଦିବେଶରୁ ଆଣେ ()
- (୩) ତୁଳାଯାତ ପଦାର୍ଥ ରସୁନା କରେ ()
- (୪) ତୁଳାଯାତ ପଦାର୍ଥ ଦିବେଶରୁ ଆଣେ ()
- (ଝ) କାର୍ଯ୍ୟସ୍ଥ ଶିଳ୍ପପଦାର୍ଥ ଇଈଶ୍ଵର କେଉଁଠି କଂଚାମାଲ ସଂଗ୍ରହ କରେ ?
- (୧) ମିଶର ()
- (୨) ଚୀନ ()
- (୩) ପାକିସ୍ତାନ ()
- (୪) ଭାରତ ()
- (ଟ) ପଶମ କେଉଁଥିରୁ ପ୍ରସ୍ତୁତ ହୁଏ ?
- (୧) ତୁଳା ()
- (୨) ମେଣ୍ଡା ଲୋମରୁ ()
- (୩) ଗାଈ ଲୋମରୁ ()
- (୪) ଟପର ଖୋସାରୁ ()
- (ଠ) ରେଶମ ରସୁନାବନରେ କିଏ ସୂଥକାରେ ପ୍ରଥମ ?
- (୧) ଅଷ୍ଟ୍ରେଲିଆ ()
- (୨) ଆମେରିକା ()
- (୩) ଚୀନ ()
- (୪) ଇଈଶ୍ଵର ()
- (ଡ) ରେଶମ କେଉଁଥିରୁ ପ୍ରସ୍ତୁତ ହୁଏ ?
- (୧) ଟପର ପୋକର ଖୋସାରୁ ()
- (୨) ମେଣ୍ଡା ଲୋମ ()
- (୩) ଗାଈ ଲୋମ ()
- (୪) ତୁଳା ()
- (ଣ) ନିମ୍ନ ଲିଖିତ ଦେଶମାନଙ୍କ ମଧ୍ୟରୁ କିଏ ହୋଟ ଶିଳ୍ପର ପ୍ରସିଦ୍ଧ ?
- (୧) ବଂଗଳା ଦେଶ ()
- (୨) ଆମେରିକା ()
- (୩) ଚୀନ ()

(ଭ) ଭାରତରୁ କେଉଁ ଦେଶଗୁଡ଼ିକୁ ଝୋଟ ଜାତ ପଦାର୍ଥ ରପ୍ତାନି ହୁଏ ?

- (୧) ପାକିସ୍ତାନ ()
 (୨) ଅଷ୍ଟ୍ରେଲିଆ ()
 (୩) ପ: ଜର୍ମାନୀ ()
 (୪) ଆର୍ଜେଣ୍ଟିନା ()

(ଶ) ଆପାତତଃ ଭାରତରେ କେତୋଟି ଲୁଗାକଳ ରହିଛି ?

- (୧) ୨୪୦ ଟି ()
 (୨) ୧୦୨୦ ଟି ()
 (୩) ୫୦୦ ଟି ()

(ଟ) ନିମ୍ନ ଦେଶ ଗୁଡ଼ିକ ମଧ୍ୟରୁ କିଏ କୃତ୍ରିମ ରେଶମ ଉତ୍ପାଦନ କରେ ?

- (୧) ଭାରତ ()
 (୨) ଜାପାନ ()
 (୩) ଚୀନ ()

(ଥ) ଆପାତତଃ ଭାରତରେ କେତୋଟି ଝୋଟକଳ ରହିଛି ?

- (୧) ପ୍ରାୟ ୧୫୦ ଟି ()
 (୨) ପ୍ରାୟ ୫୦ ଟି ()
 (୩) ପ୍ରାୟ ୧୧୦ ଟି ()

(ଦ) କେଉଁ ଦେଶ ସବୁଠାରୁ ଉତ୍କୃଷ୍ଟ ମେଷ ଲୋମ ଉତ୍ପାଦନ କରେ ?

- (୧) ଅଷ୍ଟ୍ରେଲିଆ ()
 (୨) ବେଲ୍‌ଜିଅମ୍ ()
 (୩) ଭାରତ ()

(ଧ) କେଉଁ ଦେଶ କପାସରୁ କର୍କଶ ମଧ୍ୟ କାର୍ଯ୍ୟାଗ ଶିଳ୍ପରେ ପ୍ରସାର ଲାଭ କରିଛି ?

- (୧) ଆମେରିକା ()
 (୨) ଇଂଲଣ୍ଡ ()
 (୩) ଅଷ୍ଟ୍ରେଲିଆ ()

୩। ନିମ୍ନ ପୁରୁଷ ଗୁଡ଼ିକରେ ଏକାଧିକ ଠିକ୍ ଉତ୍ତର ରହିଛି । ସେଗୁଡ଼ିକ ଘଟରେ ଥିବା ବ୍ୟକ୍ତି ମଧ୍ୟରେ (✓) ଠିକ୍ ବ୍ୟକ୍ତି :-

(କ) ଓଡ଼ିଶାର କେଉଁ ୨ କଂଚାମାଲ ବହୁଳ ପରିମାଣରେ ମିଳେ ?

- (୧) ଝୁଜା () (୨) ଲୁହା ସଥର ()
 (୩) ଗୋବୁଡ଼ି () (୪) ପଶମ ()
 (୫) ମାଂଗାଡ଼ିକ ()

(ଖ) ଶିଳ୍ପ ପାଇଁ ଓଡ଼ିଶାରେ ଜାଳେଣି ଏବଂ ଶକ୍ତି କେଉଁଠୁ ମିଳେ ?

- | | |
|-----------------------------|-----|
| (୧) ରାଉଲକେଲାର ଇସ୍ପାତ | () |
| (୨) ହୁରାକୁଦର ବିଦ୍ୟୁତ ଶକ୍ତି | () |
| (୩) ଶାଳବେରୁର କୋଇଲା | () |
| (୪) ବଂଗୋପସାଗରର ସେଣ୍ଟ୍ରାଲିୟମ | () |

(ଗ) ଇସ୍ପାତ ଶିଳ୍ପରେ କେଉଁ ୨ ଦେଶ ବିଶେଷ ଅଗ୍ରଗତି କରିଛନ୍ତି ?

- | | | | |
|---------------|-----|----------------|-----|
| (୧) ଜାପାନ | () | (୪) ଯ: ଜର୍ମାନୀ | () |
| (୨) ଶ୍ରୀଲଙ୍କା | () | (୫) ବେଲଜିୟମ | () |
| (୩) ଚୀନ | () | (୬) ପାକିସ୍ତାନ | () |

(ଘ) ଭାରତରେ କେଉଁ ରାଜ୍ୟ ଗୁଡ଼ିକ କାର୍ଯ୍ୟାଳୟ ଶିଳ୍ପରେ ଅଗ୍ରଗତି କରିଛନ୍ତି ?

- | | | | |
|----------------|-----|----------------|-----|
| (୧) ଦିଲ୍ଲୀ | () | (୫) ଆସାମ | () |
| (୨) ମଧ୍ୟପ୍ରଦେଶ | () | (୬) ଗୁଜରାଟ | () |
| (୩) ପଶ୍ଚିମ ବଂଗ | () | (୭) ମହାରାଷ୍ଟ୍ର | () |
| (୪) କର୍ଣ୍ଣାଟକ | () | | |

(ଙ) ଭାରତର କେଉଁ ସହର ଗୁଡ଼ିକରେ କାର୍ଯ୍ୟାଳୟ ଶିଳ୍ପ କାରଖାନା ଅଛି ?

- | | | | |
|--------------|-----|----------------|-----|
| (୧) କଟକ | () | (୬) ରାଉଲକେଲା | () |
| (୨) ଅହମଦାବାଦ | () | (୭) ପିମଳା | () |
| (୩) କାନପୁର | () | (୮) ଶ୍ରୀନଗର | () |
| (୪) ସୋଲାନପୁର | () | (୯) ହାଇଦ୍ରାବାଦ | () |
| (୫) ବାଂଗାଲୋର | () | | |

(ଚ) ପଶମଜାତ ପଦାର୍ଥ ପାଇଁ କିଏ ସବୁ ପ୍ରସିଦ୍ଧ ?

- | | | | |
|--------------|-----|----------------|-----|
| (୧) ଭବନେଶ୍ୱର | () | (୫) ବେଲାରୀ | () |
| (୨) ନାଗପୁର | () | (୬) କାନପୁର | () |
| (୩) ଲୁଧିଆନା | () | (୭) ହାଇଦ୍ରାବାଦ | () |
| (୪) ବାଂଗାଲୋର | () | | |

୪। ନିମ୍ନ ଧୁଗୁ ଗୁଡ଼ିକର ଉତ୍ତର ଦିଆଯାଉଥିବା ସ୍ଥାନ ମଧ୍ୟରେ ଲେଖ ?

(କ) ଲୁହାର ଗାଟି ମୁଖ୍ୟ ବ୍ୟବହାର ଲେଖ ?

୧। ୨। ୩।

(ଖ) ଇସ୍ପାତ ଆମର କି କି କାମରେ ଲାଗେ ? (ଗାଟି)

୧। ୨। ୩।

(ଗ) ଭାରତରେ ପ୍ରସିଦ୍ଧ ଗାଟି ଲୋହ ଓ ଇସ୍ପାତ କାରଖାନାର ନାମ ଲେଖ ?

୧। ୨। ୩।

(ଘ) ଭାରତ ବ୍ୟତୀତ କାର୍ଯ୍ୟାଳୟ ଶିଳ୍ପରେ ପ୍ରସାର ଲାଭ କରିଥିବା ଗାଟି ଦେଶର ନାମ ଲେଖ ?

୧। ୨। ୩।

(ଙ) ରେଶମ ଧୁସୁଡ଼କାରୀ ୨ଟି ଦେଶର ନାମ ଲେଖ ?

୧। ୨।

(ଚ) ଦଇତି ହୋଟ ଜାତ ପଦାର୍ଥର ନାମ ଲେଖ ?

୧। ୨।

(ଛ) ତମେ ଧରିଥିବା ଶିଳ୍ପ ଗୁଡ଼ିକ ମଧ୍ୟରୁ କିଏ ଆମର ଦେଶୀ ଉପକାରୀ ବୋଲି ଭାବୁଛ ? କାହିଁକି ?

(୨ ଟି ଧାଡ଼ିରେ ଉତ୍ତର ଲେଖ) ।

...

ଆଦର୍ଶ ଉତ୍ତର

କେତୋଟି ପ୍ରଧାନ ଶିଳ୍ପ

୧। (କ) କୃଷକାୟ ଖ- ବମ୍ବେ (୧୯୫୪) ଗ- ଲେହୁ
 ଘ- ରାଉରକେଲା ଡ- ଦ୍ଵିତୀୟ ଚ- ସପ୍ତମ
 ଛ - ଓପାକା ଜ- କାଠ ଝ - ଅଷ୍ଟେଇଆ

୨। କ- ୩ , ଖ- ୩ , ଗ- ୨ , ଘ- ୧ , ଡ- ୩
 ଚ- ୩ , ଛ- ୨, ୩ , ଜ- ୧ , ଝ- ୩ , ଞ- ୨ ,
 ଟ- ୪ , ଠ- ୧ , ଡ- ୧ , ଢ- ୨, ୪ , ଣ- ୩ ,
 ତ- ୨ , ଥ- ୩ , ଦ- ୧ , ଧ- ୨ , ।

୩। କ- ୨, ୩, ୪ । ଖ- ୨, ୩ । ଗ- ୧, ୪, ୫ ।
 ଘ- ୩, ୪, ୬, ୭ । ଡ- ୨, ୩, ୪, ୫, ୮ । ଚ- ୩, ୪, ୫ ।

୪। କ- ରେଳ ଲାଇନ୍ , ବିଭିନ୍ନ ମେସିନ୍ ଅସ୍ତ୍ର ଶସ୍ତ୍ର ।
 ଖ- ବାସନ କୁସନ , ଅସ୍ତ୍ରୋପକରଣ ସରଂଜାମ ଇତ୍ୟାଦି ।
 ଗ- ରାଉରକେଲା , ବୋକାରେ , ଭିଲାଇ ।
 ଘ- ଆମେରିକା , ଜାପାନ , ଚୀନ ।
 ଡ- ପ୍ରାନ୍ତସ , ଇଟାଲି ।
 ଚ- ଅଖା , କେରପାଲ ।
 ଛ - ଲେହୁ କିମ୍ବା କାର୍ଯ୍ୟାସ ।
 ଏଥିରୁ ପ୍ରସ୍ତୁତ ଯଦାର୍ଥ ଆମେ ବହୁଳ ଭାବେ ବ୍ୟବହାର କରୁ ।

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LEARNING EXPERIENCESPRE-BROADCAST ACTIVITIES

Method: Question-Answer

Teacher's Activities	Activities of the Students
<p>Tr: Hellow students! you are welcome to the second programme of our geography series of school broadcast. In this programme, you will listen to a discussion on a topic taken from your syllabus Before going to the programme, let me ask you certain questions from your everyday life.</p>	
<p>Q.1 What are the things you have brought here with you?</p>	<p>Ans: Books, pen, pencil, instrument box, etc.</p>
<p>Q.2 From where did you get your books? (Pointing to one student).</p>	<p>Ans: I have purchased it from the bookseller.</p>
<p>Q.3 Where the book seller brought it from?</p>	<p>Ans: From the printing press.</p>
<p>Q.4 With what material the press prepared this book.</p>	<p>Ans: Paper, printing machine, ink, etc.</p>
<p>Q.5 Where the papers come from?</p>	<p>Ans: From the paper mills.</p>

Teacher's Activities	Activities of the Students
Tr: Yes, our books and note books etc. are the products of paper industries.	
Q.6 Mr. _____ can you give the name of any place with paper industry in our state?	Yes, Sir, Chowdwar and Brajaraj Nagar.
Q.7 What other industries are there in Chowdwar?	The textile mills and Kalinga tubes.
Q.8 What other industries are there in Orissa?	Barang Glass Factory, Television Industry, Rourkela Steel Plant, Koraput MIG Factory and many others.
Tr: Well, most of the things we are using everyday such as clothes, utensils, pen, cycle, radio etc., are the products of different industries.	
To-day you will listen to a programme on establishment of different industries. Through this you may listen the names of different materials, and the names of the places, countries where various industries have been established. You may write them in brief if you feel that you may not remember them. Like other programmes you will be shown some pictures. Please see them carefully and listen to the programmes.	
(The radio to be tuned and slides to be projected).	

ACTIVITIES DURING THE BROADCAST

Method: Radiovision.

Aids: Slides of

1. Lolita, Bimbadhara and an industrialist sitting together.
2. A common industrial sight.
3. A power house
4. Heerakund dam
5. Rourkela steel plant
6. A moving train
7. Medical operation scene
8. Textile Mills
9. Silk worm and its cocoon
10. A herd of sheep
11. A jute scene

These slides will be shown in synchronisation with the contents of the broadcast programmes. At the time of projection the important parts may be shown with the help of a pointer.

Teaching points through the radio					Visuals
1	Programme begins	x	x	x	Slide No.1
2	Lolita: "Why don't you start an industry?....."				Slide No.2
		x	x	x	x x
3	Lolita: "We get electricity from Heerakund"....."				Slide No.3
					immediately
					followed by
					No.4
		x	x	x	x x
4	Lolita: "There is an iron and steel factory				Slide No.5
	in Rourkela."				
		x	x	x	x x

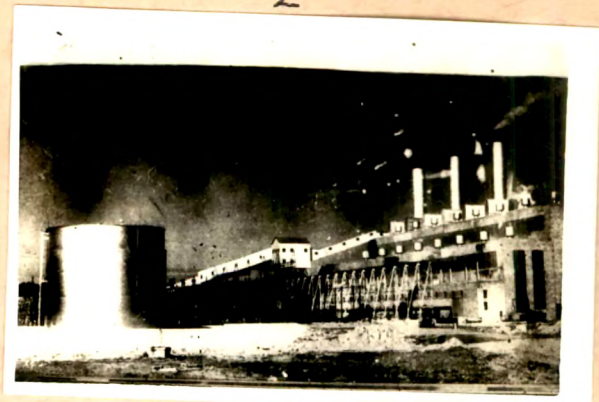
Teaching points through the radio			Visuals
5	Bimbadhara: "Thousands of people and quintals of things are carried by trains..... "		Slide No.6
	x x x		x x
6	Lolita: "Doctors at the time of operation take the help of steel industry."		Slide No.7
	x x x		x x
7	Industrialist: "In the steel plant at Rourkela, steel is produced day and night."		Re-projection of Slide No.6
	x x x		x x
8	Bimbadhara: "You should start establishing a textile mill\$."		Slide No.8
	x x x		x x
9	Bimbadhara: "Silk thread is produced from the cell of the silk worm."		Slide No.9
	x x x		x x
10	Lolita: "Sheep cultivation is done in Rajasthan, Punjab."		Slide No.10
	x x x		x x
11	Bimbadhara: "Bags, carpets etc. are produced from jute."		Slide No.11
	x x x		x x

(Photographs of the slides developed by the Investigator are given in the following pages).

1



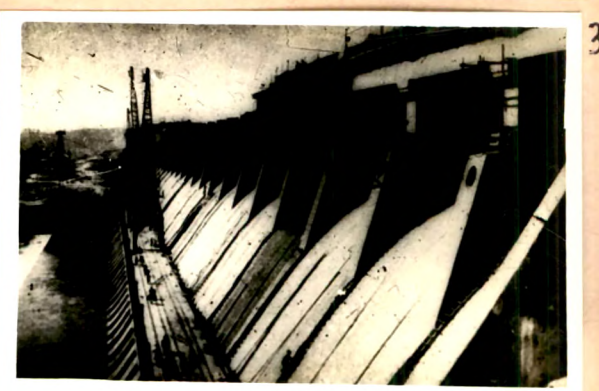
2



4



3



6



7



8



9



POST BROADCAST ACTIVITIES

Method: Quiz

Aids: (i) Map of World (ii) Map of India.

Teacher's Activities	Expected Students' Activities
<p>Tr: Well students! you have just listened to a feature on industries. I hope, you have enjoyed it and in the process must have remembered the names of various things, places and countries. Now, we will have a competition.</p> <p>(Teacher would divide the class into two groups and start the quiz.)</p> <p>A question will be asked to one of the groups. If any member of the group gives the right answer, the group will get a point. If the group fails to answer and the right answer is given by the other group, the point will be awarded to them. In this way questions will be asked simultaneously to group 1 and group 2. Fifteen seconds will be the time limit for answering a question. In the process also the teacher would use maps to make the students understand facts.</p>	<p>Students will participate actively in the quiz.</p>
<p>Q. The teacher can ask any question framed for the criterion test given earlier in this package. At the end he will declare the name of the winning group.</p>	
<p>Tr: Students! we have discussed an interesting topic to-day. After going home, please read it again from your books. To-morrow we will have the test. Please come prepared.</p>	

Thank you all.

DEVELOPING STRATEGIES FOR EFFECTIVE UTILISATION
OF GEOGRAPHY BROADCAST PROGRAMMES

Title: PRUTHIVIRA JANA BAHULA O JANA BIRALA ANCHALA
(Thickly and thinly populated areas of the world)

Overview

In this topic the students will learn about the thickly and thinly populated areas of different regions of the world with the reasons thereof.

Form of the Broadcast: Teacher Student Discussion.

CONTENT SEQUENCE

- 1 According to population, world may be divided into thickly and thinly populated regions.
- 2 Thick population depends upon land form, irrigation facility, climate, trade and commerce, transportation, etc.
- 3(i) River valleys of various countries being fertile for agricultural purposes are thickly populated.
 India stands second in the world in respect of population of 65 crores around. Northern India is thickly populated because of flat planes for cultivation of wheat, paddy, sugarcane etc., in the planes of Ganges, Yamuna and their tributaries; and the transport facilities of roadways, railways and airways. The river valleys of Hwang Ho, Yang Tse Kiang, Sikiang being fertile for cultivation of Paddy, Wheat, Soyabin, Cotton, etc; China occupies the 1st place in the world having more than 71 crores people. The river valley of Nile in Africa which originates from the Victoria Lake is responsible for thick population in Misser (Egypt). A dam has been constructed on the river Nile at Aswan for the sake of irrigation. Missér is called the "Gift of the Nile". Pyramids are the signs of ancient civilization there. Similarly, Irawadi valley of Burma, Mississippi valley of North America and the Java, Sumatra and Bali Islands of Indonesia are thickly populated due to fertility of land and favourable climatic conditions.
- (ii) European countries like Great Britain, France, W.Germany, Belgium, etc. are thickly populated because of the facilities for industries and trade countries. Europe has

a strong industrial base due to availability of Coal, Iron ores, Electricity, etc.

Similarly in North America number of industries have flourished due to easy availability of Coal, Petroleum and Electricity for which it is thickly populated.

- (iii) Meeting places of waterways, roadways and airways are advantageous for trade and business which is a cause for thick population. Cities like London, Sanghai, Calcutta, New York etc. belong to this category. The islands of Java, Sumatra and Bali being important business Centres, have thick population. The "Sadhavas" (A Business Caste) used to go there for their business.

- 4 The regions where climate is unhealthy, ^{where} there is no ^{where} avenue for industrial set up and ^{where} there is no transport facility, are thinly populated. Among the thinly populated regions: the equatorial forests, Tundras, desert areas etc. are of mention. In the equatorial forests like Congo river valley in Africa, Amazon valley in South America, it rains throughout the year for which the climate is unhealthy. Hence thin population. Northern part of Canada, Greenland, Siberia which come under the Tundras are the snow covered areas for which they are thinly populated. Similarly, the Himalayas are thinly populated because of heavy snow fall.

EXPECTED TERMINAL BEHAVIOUR

Students will be able to

- 1.1 agree with the statement, "In respect of population, world can be divided into categories of thinly and thickly populated regions".
- 2.2 point out the conditions for thick population.
- 3.3 identify the rank of India in respect of population and its part which is thickly populated.
- 3.4 recognise the approximate population of India.
- 3.5 point out the reason for thick population in North India.
- 3.6 tick mark the name of the rivers, the main crops and the transport facilities in North India.
- 3.7 identify the cause of formation of Ganges valley.
- 3.8 recognise the name of the country standing first in population and its approximate population.
- 3.9 point out the reason for w thick population of China.
- 3.10 tick mark the river valleys and the main crops of China.
- 3.11 identify the reason for thick population of Egypt (Misser).
- 3.12 recall the famous river of Africa and state its origin.
- 3.13 agree with the statement, "There is a dam on Nile at Aswan".
- 3.14 recognise the purpose for which the Aswan dam is constructed.
- 3.15 recognise the other name of Egypt (Misser).
- 3.16 point out the symbol of ancient civilization in Egypt.
- 3.17 give examples of thickly populated river valleys of Burma and America.
- 3.18 identify the reason for fertility of the river valleys of South-East Asia.

- 3.19 Write the names of two thickly populated islands of Indonesia and state the reason for it.
- 3.20 recognise the purpose of visit of "Sadhavas" to the islands of Java, Sumatra and Bali.
- 3.21 agree with the statement that "Many industries are seen in Europe because of the availability of coal, iron ore and electricity".
- 3.22 tick mark two thickly populated countries of Europe.
- 3.23 identify the the reason for thick population of Great Britain, France and North America.
- 3.24 identify the name of the river flowing through London and the reason for London's thick population.
- 3.25 agree with the statement, "The meeting places of airways, railways and roadways are advantageous for establishment of commerce and industry".
- 3.26 recall the names of two cities which are the meeting places of airways, railways and water ways.
- 3.27 point out the name of the place where U.N.O. is situated.
- 4.28 recognise the factors for which a place is thinly populated.
- 4.29 mention two thinly populated regions of the world.
- 4.30 recognise the areas belonging to equatorial forests and Tundras.
- 4.31 recognise the reason for thin population of Equatorial forest regions, Tundras and Himalayas.

CRITERION TEST

- 1.1.1 In respect of population, the categories to which ()
different areas of the world can be placed are
thickly and thinly populated.
(Put a '✓' if the statement is true).
- 2.2.2 The conditions necessary for thick population are :
(i) Hilly land () (iv) Salty water ()
(ii) Healthy climate () (v) Industrial centre ()
(iii) Land form ()
- 3.3.3 What is the rank of India in the world in respect of
population?
(i) 1st () (iii) 3rd ()
(ii) 2nd () (iv) 4th ()
- 3.3.4 In which part of India many people live?
(i) Northern India ()
(ii) Eastern India ()
(iii) South^{ern} India ()
(iv) Western India ()
- 3.4.5 What is the figure of population in India?
(i) Approximately 100 crores ()
(ii) Approximately 65 crores ()
(iii) Approximately 35 crores ()
- 3.5.6 What is the reason for thick population of North India?
(i) Most of the areas are hilly. ()
(ii) There are many rivers. ()
(iii) Most of the lands are plane. ()
(iv) The climate is cool. ()
- 3.6.7 What are the rivers flowing in North India?
(i) Mahanadi () (iv) Baitarani ()
(ii) Ganges () (v) Brahmaputra ()
(iii) Yamuna () (vi) Hoyang Ho ()

- 3.6.8 What are the main crops of north India?
 (i) Paddy () (iv) Sugarcane ()
 (ii) Wheat () (v) Tobacco ()
 (iii) Dates () (vi) Jute ()
- 3.6.9 What are the transport facilities in north India?
 (i) Railways and waterways only ()
 (ii) Only airways ()
 (iii) Only roadways ()
 (iv) Both railways, roadways
 airways and waterways ()
- 3.7.10 How is the Ganges plane valley formed?
 (i) Because of the flow of Ganges ()
 (ii) The rivers have carried the soils down
 from hilly areas ()
 (iii) It has been made plane by using tractor ()
- 3.8.11 Which country occupies the 1st place in respect of
 population?
 (i) China () (iii) Japan ()
 (ii) India () (iv) Pakistan ()
- 3.8.12 What is the population figure of China?
 (i) Around 65 crores ()
 (ii) Around 71 crores ()
 (iii) Around 50 crores ()
- 3.9.13 Why China is thickly populated?
 (i) The river valleys are fertile ()
 (ii) There are many industries ()
 (iii) It is a religious base ()
- 3.10.14 The river _____ flows through China.
 (Hwang Ho, Thames, Amazon)
- 3.10.15 Paddy and wheat are the main crops of China.
 (Put a / if the statement is true).
- 3.11.16 Why is Egypt thickly populated?
 (i) There are many industries. ()
 (ii) Because of the irrigation facilities ()
 Cultivation is a successful business. ()
 (iii) The climate is extremely healthy. ()

- 3.12.17 _____ is the famous river in Africa.
- 3.12.18 Where from river Nile is originated?
- (i) Victoria Lake ()
- (ii) Arabian Sea ()
- (iii) Red Sea ()
- 3.13.19 There is a dam on 'Nile' at Aswan.
- (Put a / if the statement is true).
- 3.14.20 What is the purpose of the construction of the dam at Aswan?
- (i) For cultivation ()
- (ii) To protect the low areas from flood ()
- (iii) For transportation ()
- (iv) For cultivation of fish ()
- 3.15.21 What is the other name of Egypt?
- (i) Land of rising Sun ()
- (ii) Zoo of the nature ()
- (iii) Gift of the Nile ()
- 3.16.22 What are the symbols of the ancient civilisation in Egypt?
- (i) The churches and temples ()
- (ii) The Pyramids ()
- (iii) The valuables found from excavation ()
- 3.17.23 Give the examples of two thickly populated river valleys of Burma and America.
- 3.17.24 River Irawadi has flown through the country of _____.
- 3.18.25 Why are the river valleys of south east Asia fertile?
- (i) It comes under monsoon climate. ()
- (ii) It comes under the equable climate. ()
- (iii) It comes under equatorial climate. ()
- 3.19.26 Write the names of two thickly populated islands of Indonesia.

- 3.19.27 Why are Java, Sumatra and Bali agriculturally advanced?
 (i) They are situated near the equator. ()
 (ii) There is enough facility for irrigation. ()
 (iii) The islands are full of black soil. ()
- 3.20.28 Why were the 'Sadhavas' going to Java, Sumatra and Bali?
 (i) To spend holidays. ()
 (ii) To present cultural programmes. ()
 (iii) For doing trade and business. ()
- 3.21.29 Due to the availability of coal, iron ores, electricity etc. Europe has a strong industrial base.
 (Put a / if the statement is true).
- 3.22.30 Tick out two thickly populated countries of Europe.
 (i) India () (iv) West Germany ()
 (ii) Belgium () (v) France ()
 (iii) China () (vi) Burma ()
- 3.23.31 Why are Great Britain and France thickly populated?
 (i) Lands are highly fertile. ()
 (ii) There are many industries. ()
 (iii) Cold climate flows there. ()
- 3.23.32 Why is north America thickly populated?
 (i) Climate is healthy. ()
 (ii) There are many rivers. ()
 (iii) Due to availability of coal, petroleum and electricity many industries have flourished ()
- 3.24.33 The river _____ has flown through London.
 (Howang Ho, Thames, Amazon)
- 3.24.34 Why is London thickly populated?
 (i) It is a religious place. ()
 (ii) It is a Centre of Commerce and Industries. ()
 (iii) The land is very much fertile. ()
- 3.25.35 "The meeting places of roadways, railways and airways are volunerable for business and industry". ()
 (Put a / if the statement is true).

- 3.26.36 Name two cities which are the meeting places of airways, roadways and waterways.
- 3.27.37 Where is U.N.O. situated?
 (i) New Delhi () (iii) London ()
 (ii) New York () (iv) Peking ()
- 4.28.38 What are the factors for which a place is thinly populated?
 (i) Healthy climate. ()
 (ii) Unhealthy climate. ()
 (iii) Lack of transportation. ()
 (iv) Fertile land. ()
- 4.29.39 Write the names of two thinly populated regions of the world.
- 4.30.40 Tick out two areas belonging to equatorial forests.
 (i) Congo River Valley () (iv) Amazon Valley ()
 (ii) Tundras () (v) Siberia ()
- 4.30.41 Write the names of two countries in the Tundra region.
- 4.31.42 Why are the equatorial forest areas thinly populated?
 (i) The climate is unhealthy as it rains throughout the year. ()
 (ii) Many mountains are seen there. ()
 (iii) Scarcity of water, hence thinly populated. ()
- 4.31.43 Why don't many people stay in Tundra region?
 (i) There are many wild animals. ()
 (ii) Climate is unhealthy as it is a snow covered area. ()
 (iii) There is no facility for transportation. ()
- 4.31.44 "Heavy snow fall in Himalayas leads to thick population". ()
 (Put a / if the statement is true).

(Test to be arranged according to the types of items)

ଆକାଶବାଣୀ

ଦିବ୍ୟାଳୟ କାର୍ଯ୍ୟକ୍ରମ

ମାନ ନିର୍ଦ୍ଧାରଣ ପରୀକ୍ଷା

ଦିଷ୍ଟ : ପ୍ରଥମୀର ଜନ ବହୁଳ ଓ ଜନ ବିରଳ ଅଂଚଳ

ନାମ :

ଲୋକ ନଂ :

ତାରିଖ :

ସମସ୍ତ ପ୍ରଶ୍ନର ଉତ୍ତର ଦିଅ

୧। ଠିକ୍ ଉତ୍ତର ପାଖରେ (✓) ଠିକ୍ ଦିଅ ?

(କ) ଜନସଂଖ୍ୟା ବୃଦ୍ଧିର ଭାରତ ପ୍ରଥମୀରେ କେଉଁ ସ୍ଥାନ ଅଧିକାର କରିଛି ?

(୧) ପ୍ରଥମ ()

(୨) ଦ୍ୱିତୀୟ ()

(୩) ତୃତୀୟ ()

(୪) ଚତୁର୍ଥ ()

(ଖ) ଭାରତର ଲୋକ ସଂଖ୍ୟା କେତେ ?

(୧) ପ୍ରାୟ ୧୦୦ କୋଟି ()

(୨) ପ୍ରାୟ ୫୫ କୋଟି ()

(୩) ପ୍ରାୟ ୩୫ କୋଟି ()

(ଗ) ଭାରତର କେଉଁ ଅଂଚଳରେ ବେଶି ଲୋକ ବାସ କରନ୍ତି ?

(୧) ଉତ୍ତରାଂଚଳରେ ()

(୨) ପୂର୍ବୀଂଚଳରେ ()

(୩) ଦକ୍ଷିଣୀଂଚଳରେ ()

(୪) ପଶ୍ଚିମୀଂଚଳରେ ()

(ଘ) ଭାରତର ଉତ୍ତରୀଂଚଳ ଜନବହୁଳ ହେବାର କାରଣ କଣ ?

(୧) ଅଧିକାଂଶ ଅଂଚଳ ପାହାଡ଼ିଆ ()

(୨) ଏ ଅଂଚଳରେ ବେଶି ନଦୀ ଅଛି ()

(୩) ଏଠାକାର ଅଧିକାଂଶ ଅଂଚଳ ସମତଳ ()

(୪) ଏଠାରେ ଶୀତଳ ଜଳବାୟୁ ପ୍ରବାହିତ ହେଉଅଛି ()

- (ଭ) ଗାଁଗେୟ ସମତଳ ଅଂଚଳ ସ୍ତୃଷ୍ଟି ହେବାର କାରଣ କଣ ?
- (୧) ଗଂଗାନଦୀ ପ୍ରବାହିତ ହେଉଥିବାରୁ ()
- (୨) ନଦୀ ସବୁ ପାର୍ବତ୍ୟ ଅଂଚଳରୁ ପ୍ରମାଣିତ ହୋଇ ଆସୁଛନ୍ତି ()
- (୩) ଏ ଅଂଚଳକୁ ଗ୍ରୀଷ୍ମର ବୃଷା ସମତଳ କରାଯାଇଛି ()
- (ଚ) ଜନସଂଖ୍ୟା ବୃଦ୍ଧିର କେଉଁ ବେଶ ପ୍ରଭାବୀରେ ପ୍ରଥମ ?
- (୧) ଟୀନ ()
- (୨) ଭାରତ ()
- (୩) ଜାପାନ ()
- (୪) ପାକିସ୍ତାନ ()
- (ଛ) ଟୀନର ଲୋକ ସଂଖ୍ୟା କେତେ ?
- (୧) ପ୍ରାୟ ୫୫ କୋଟି ()
- (୨) ପ୍ରାୟ ୭୫ କୋଟି ()
- (୩) ପ୍ରାୟ ୫୦ କୋଟି ()
- (ଜ) ଟୀନ ଜନବହୁଳ ହେବାର କାରଣ କଣ ?
- (୧) ନଦୀ ଉପତ୍ୟକା ଗତିକର ସମତଳ ଅଂଚଳ ଉର୍ବର ()
- (୨) ଏଠାରେ ଧୂରର ପରିମାଣରେ କଳ କାରଖାନା ଅଛି ()
- (୩) ଏହା ଗୋଟିଏ ଧର୍ମ ପୀଠ ()
- (ଝ) ଲଣ୍ଡନ ସହର କାହିଁକି ଜନବହୁଳ ?
- (୧) ଏହା ଏକ ଧର୍ମପୀଠ ()
- (୨) ଏହା ଗୋଟିଏ ପ୍ରଧାନ ଶିଳ୍ପ ବାଣିଜ୍ୟ କେନ୍ଦ୍ର ()
- (୩) ଏଠାରେ ଜମି ଖୁବ୍ ଉର୍ବର ()
- (ଟି) ନୀଳ ନଦୀ କେଉଁଠୁ ବାହାରିଛି ?
- ✓ (୧) ଭିକ୍ଟୋରିଆ ହ୍ରଦରୁ ()
- (୨) ଆରବ ସାଗରରୁ ()
- (୩) ଲୋହିତ ସାଗରରୁ ()
- (ଡ) ମିଶର ଜନବହୁଳ ହେବାର କାରଣ କଣ ?
- (୧) ସେଠାରେ ଅନେକ ଶିଳ୍ପାଂଚଳ ଗଢି ଉଠିଛି ()
- (୨) ଜଳସେଚନର ସବିଧା ଥିବାରୁ କୃଷି କାର୍ଯ୍ୟ ସେଠାରେ ଏକ ପଳସୁଦ୍ଧ ବ୍ୟବସାୟ ()
- (୩) ସେଠାକାର ଜଳବାୟୁ ଅତ୍ୟନ୍ତ ସ୍ବାସ୍ଥକର ()

- (୦) ଏସିୟାଟୋରେ କଣ ଧର୍ମ ନଦୀ ବ୍ୟବ ନିର୍ମାଣ କରାଯାଇଛି ?
- (୧) ଜଳ ସେଚନର ସୁବିଧା ନିମିତ୍ତ ()
- (୨) ଚଳ ଅଂଚଳ ଗୁଡ଼ିକୁ ବନ୍ୟା ବାଉରୁ ରକ୍ଷା କରିବାପାଇଁ ()
- (୩) ଗମନା ଗମନର ସୁବିଧା ନିମିତ୍ତ ()
- (୪) ମାଛଚାଷ ପାଇଁ ()
- (୧) ମିଶରର ପୁରାତନ ସଭ୍ୟତାରୁ କି ନିବର୍ତ୍ତନ ରହିଛି ?
- (୧) ସେଠାରେ ଅନେକ ଗିର୍ଜା ଏବଂ ମନ୍ଦିର ଅଛି ()
- (୨) ସେଠାରେ ଅନେକ ପିରାମିଡ ବେଲୁଆକୁ ମିଳେ ()
- (୩) ମାଟିଚଳୁ ଅନେକ ମୂଲ୍ୟବାନ ଧବାର୍ଥ ମିଳିଛି ()
- (୬) ମିଶରର ଅନ୍ୟ ନାମ କଣ ?
- (୧) ସୁର୍ଯ୍ୟୋଦୟର ଦେଶ ()
- (୨) ପ୍ରକୃତିର ଚିତ୍ତିଆଖାନା ()
- (୩) ନୀଳ ନଦୀର ଦାନ ()
- (୩) ବର୍ଷର ପୂର୍ବ ଏସିଆର ନଦୀ ଉପତ୍ୟକା ଗୁଡ଼ିକ ଉର୍ଦ୍ଧ୍ବ ଦେବାର କାରଣ କଣ ?
- (୧) ଏହା ମୋସମୀ ଜଳବାୟୁର ଅନୁର୍ଗତ ()
- (୨) ଏହା ସମଶୀତୋଷ୍ଣ ଜଳବାୟୁର ଅନୁର୍ଗତ ()
- (୩) ଏଠାରେ ନିରକ୍ଷ ଜଳବାୟୁ ପ୍ରବାହିତ ହୁଏ ()
- (୪) ଜାଭା, ସୁମାତ୍ରା ଏବଂ ବାଲିସ୍ତାପ କାହିଁକି କୃଷି ସମୃଦ୍ଧ ?
- (୧) ଏ ଗୁଡ଼ିକ ବିଷୁବରେଖା ନିକଟରେ ଅବସ୍ଥିତ ()
- (୨) ଏଠାରେ ଜଳସେଚନ ପାଇଁ ଅଧିକ ସୁବିଧା କରାଯାଇଛି ()
- (୩) ଏଠାରେ ଅଧିକ କୃଷି କାର୍ଯ୍ୟ ସମ୍ଭବ ()
- (୫) ସାଧକମାନେ ଜାଭା, ସୁମାତ୍ରା ଓ ବାଲିସ୍ତାପକୁ କଣ ପାଇଁ ଯାଉଥିଲେ ?
- (୧) ଅବସର ସମୟ କଟାଇବା ପାଇଁ ()
- (୨) ସାମୁଦ୍ରିକ କାର୍ଯ୍ୟକ୍ରମ ଧରିବେଶ କରିବା ପାଇଁ ()
- (୩) ବାଣିଜ୍ୟ ବ୍ୟବସାୟ କରିବା ପାଇଁ ()
- (୬) ଗ୍ରେଟ୍‌ବ୍ରିଟେନ ଏବଂ ସ୍ଥାନୀୟ ଜନବହୁଳ ଦେବାର କାରଣ କଣ ?
- (୧) ସେଠାକାର ଭୂମି ଖୁବ୍ ଉର୍ଦ୍ଧ୍ବ ()
- (୨) ସେଠାରେ ବହୁଳ ପରିମାଣରେ ଶିଳ୍ପାଂଶଳମାନ ରହିଛି ()
- (୩) ସେଠାରେ ଶୀତଳ ଜଳବାୟୁ ପ୍ରବାହିତ ହୁଏ ()

(ଧ) ଉତ୍ତର ଆମେରିକା ଜନବହୁଳ ହେବାର କାରଣ କଣ ?

- (୧) ଏଠାରେ ଜଳବାୟୁ ଅତ୍ୟନ୍ତ ସ୍ବାସ୍ଥ୍ୟକର ()
 (୨) ଏଠାରେ ବହୁତ ଗୁଡ଼ିଏ ନଦୀ ବେଖାଯାଏ ()
 (୩) କୋଇଲା ଧେନ୍ତୁଲିୟମ ଏବଂ ବିଦ୍ୟୁତ୍ ଧୂତର ଧରି-
 ମାଣରେ ମିଳୁଥିବାରୁ ଶିଳ୍ପାଚଳମାନ ଗଢ଼ି ଉଠିଛି ()

(ନ) ମିଳିତ ଜାତିସଂଘ କେଉଁଠାରେ ଅବସ୍ଥିତ ?

- (୧) ନଆଦିଲ୍ଲା ()
 (୨) ନିଉୟର୍କ ()
 (୩) ଲଣ୍ଡନ ()
 (୪) ସେଣ୍ଟ ()

(ପ) ବିଷୟ ମଣ୍ଡଳୀୟ ଅରଣ୍ୟ ଅଂଚଳ ଗୁଡ଼ିକ କାହିଁକି ଜନବିରଳ ?

- (୧) ବର୍ଷସାରା ବର୍ଷା ହେଉଥିବାରୁ ଅତ୍ୟନ୍ତ ଅସ୍ବାସ୍ଥ୍ୟକର ()
 (୨) ଏଠାରେ ଅଧିକ ଧନିତ ଶ୍ରେଣୀ ବେଖାଯାଏ ()
 (୩) ଏ ସବୁ ଅଂଚଳରେ ଜଳର ଅଭାବ ବେଖାଯାଏ ()

(ଫ) ଟୁଂସ୍ତ୍ରାଂଚଳରେ କାହିଁକି ବେଶି ଲୋକ ବାସ କରନ୍ତି ନାହିଁ ?

- (୧) ଏଠାରେ ବହୁତ ବଣ୍ୟ ଜନ୍ତୁ ବେଖାଯାନ୍ତି ()
 (୨) ବରଫାବୃତ୍ତ ଅଂଚଳ ହୋଇଥିବାରୁ ଜଳବାୟୁ ଅସ୍ବାସ୍ଥ୍ୟକର ()
 (୩) ଗମନା ଗମନର ସୁବିଧା ନାହିଁ ()

(ବ) ଉତ୍ତର ଭାରତରେ ଗମନାଗମନ ଧାଇଁ କି ସୁବିଧା ରହିଛି ?

- (୧) ରେଲପଥ ଓ ଜଳପଥ ()
 (୨) କେବଳ ଆକାଶ ପଥ ()
 (୩) କେବଳ ସ୍ଥଳ ପଥ ()
 (୪) ଉଭୟ ରେଲପଥ, ଆକାଶପଥ, ସ୍ଥଳପଥ ଓ ଜଳପଥ ()

୨। ନିମ୍ନ ପ୍ରଶ୍ନଗୁଡ଼ିକରେ ଏକାଧିକ ଠିକ୍ ଉତ୍ତର ରହିଛି । ସେଗୁଡ଼ିକ ଘାଣ୍ଟରେ (✓) ଠିକ୍ ଦିଅ ।

(କ) ନିମ୍ନଲିଖିତ କେଉଁ ନଦୀ ଗୁଡ଼ିକ ଉତ୍ତର ଭାରତରେ ଧ୍ରୁବାବୃତ ?

- (୧) ମହାନଦୀ () (୪) ବୈତରଣୀ ()
 (୨) ଗଂଗା () (୫) ବ୍ରହ୍ମପୁତ୍ର ()
 (୩) ଯମୁନା () (୬) ହୋୟାହୋ ()

(ଖ) କୌଣସି ସ୍ଥାନ ଜନବହୁଳ ହେବାପାଇଁ ମୁଖ୍ୟତଃ କେଉଁ କେଉଁ ଅବସ୍ଥା ଉପରେ ନିର୍ଭର କରେ ?

- (୧) ପାହାଡ଼ିଆ ଜମି () (୪) ଲଣି ଧାଣି ()
 (୨) ଉତ୍ତମ ଜଳବାୟୁ () (୫) ଶିଳ୍ପ କେନ୍ଦ୍ର ()
 (୩) ସମତଳ ଜମି () (୬) ଦୁର୍ଗୁପ ଯୋଗାଣକେନ୍ଦ୍ର ()

- (ଗ) ଉତ୍ତର ଭାରତରେ ମୁଖ୍ୟ କୃଷିଜାତି ଦ୍ରବ୍ୟ ଗୁଡ଼ିକ କଣ ?
 (୧) ଧାନ () (୪) ଆଖୁ ()
 (୨) ଗହମ () (୫) ଧାଆଁ ପତ୍ର ()
 (୩) ଖଜୁର () (୬) ଝୋଟ ()
- (ଘ) ଇଉରୋପର ୨ଟି ଉନ୍ନତ ଜନବହୁଳ ଦେଶର ନାମ ବର୍ଣ୍ଣାୟ ?
 (୧) ଭାରତ () (୪) ପଶ୍ଚିମ ଜର୍ମାନୀ ()
 (୨) ବେଲ୍‌ଜିୟମ () (୫) ପ୍ରାନ୍ସ ()
 (୩) ଚୀନ () (୬) ବର୍ମା ()
- (ଙ) କୌଣସି ସ୍ଥାନର ଜନବିରଳତା କେଉଁ କେଉଁ କାରଣ ଗୁଡ଼ିକ ଉପରେ ନିର୍ଭର କରେ ?
 (୧) ସ୍ବାସ୍ଥ୍ୟକର ଜଳବାୟୁ () (୩) ଗମନାଗମନର ଅସୁବିଧା ()
 (୨) ଅସ୍ବାସ୍ଥ୍ୟକର ଜଳବାୟୁ () (୪) ଜମିର ଉର୍ବରତା ()
- (ଚ) ୨ଟି ଦେଶର ଅରଣ୍ୟର ନାମ ବର୍ଣ୍ଣାୟ ?
 (୧) କଂଗୋ () (୩) ଆମାଜନ ଅବବାହିକା ()
 (୨) ଟୁଆଟଳ () (୪) ସାଇବେରିଆ ()
- ୩। ଶୂନ୍ୟସ୍ଥାନ ପୂରଣ କର ?
 (କ) ----- ନଦୀ ଚୀନ ଦେଶରେ ଧ୍ରୁବାହିତ । (ହୋୟାଂହୋ , ଥେମ୍‌ସ , ଗଂଗା)
 (ଖ) ----- ନଦୀ ଇଣ୍ଡନ ସହର ମଧ୍ୟବେଳେ ଯାଇଥାନ୍ତି । (ହୋୟାଂହୋ , ଥେମ୍‌ସ , ଆମାଜନ)
 (ଗ) ----- ଆଫ୍ରିକାର ପ୍ରସିଦ୍ଧ ନଦୀ ।
 (ଘ) ଇରାବଡ଼ୀ ନଦୀ ----- ଦେଶରେ ଧ୍ରୁବାହିତ ।
- ୪। ଠିକ୍ ଉକ୍ତି ଧାଖରେ (✓) ଏବଂ ଭୁଲ୍ ଉକ୍ତି ଗୁଡ଼ିକ ଧାଖରେ (x) ଚିହ୍ନ ଦିଅ ?
 (କ) ଜନସଂଖ୍ୟା ବୃଦ୍ଧିରୁ ପୃଥ୍ବୀକୁ ଜନବହୁଳ ଏବଂ ଜନବିରଳ ନାମକ ୨ ଭାଗରେ ବିଭକ୍ତ କରାଯାଇଛି । ()
 (ଖ) ଚୀନରେ ମୁଖ୍ୟତଃ ଧାନ ଓ ଗହମ ଚାଷ କରାଯାଏ । ()
 (ଗ) ଆସ୍ତ୍ରାଲିଆରେ ନୀଳସଦୃଶ ଉପରେ ଏକ ବନ୍ଧ ନିର୍ମାଣ କରା ଯାଇଥାନ୍ତି । ()
 (ଘ) କୋଇଲା ଇହାପଥର ଏବଂ ବିଜୁଳି ପୁରର ପରିମାଣରେ ମିଳୁଥିବାରୁ ଇଉରୋପ ମହାଦେଶରେ ଅଧିକ ଶିଳ୍ପାଟନ ବେଶାଯାଏ ()
 (ଙ) ଜଳପଥ, ମୁଳପଥ ଏବଂ ଆକାଶପଥର ମିଳନ କେନ୍ଦ୍ରରେ ଶିଳ୍ପବାଣିଜ୍ୟର ଦିକାଶ ଗତେ ()
 (ଚ) ହିମାଳୟରେ ତୃଷାରପାତ ହେଉଥିବାରୁ ଏ ଅଂଶ ଅଧିକ ଜନବହୁଳ ()
- ୫। ନିମ୍ନ ପ୍ରଶ୍ନ ଗୁଡ଼ିକର ସଂକ୍ଷିପ୍ତ ଉତ୍ତର ଲେଖ ?
 (କ) ବର୍ମା ଏବଂ ଆମେରିକାର ୨ଟି ଜନବହୁଳ ନଦୀ ଉପତ୍ୟକାର ନାମ ଲେଖ ?
 (ଖ) ଇଣ୍ଡୋନେସିଆର ୨ ଟି ଜନବହୁଳ ସହର ବୃନ୍ଦର ନାମ ଲେଖ ?
 (ଗ) ଜଳପଥ, ଆକାଶପଥ ଏବଂ ମୁଳପଥର ମିଳନ କେନ୍ଦ୍ରରେ ଗଢ଼ି ଉଠିଥିବା ଯେ କୌଣସି ୨ଟି ସହରର ନାମ ଲେଖ ?
 (ଘ) ପୃଥ୍ବୀର ୨ ଟି ଜନବିରଳ ଅଂଶର ନାମ ଲେଖ ?
 (ଙ) ଟୁଆଟଳର ୨ଟି ରାଜ୍ୟର ନାମ ଲେଖ ?

ଆ ଦ ଶ ଉ ଋ ଌ

ପଥକୀର ଜନ ଦହଳ ଓ ଜନ ବିରଳ ଅଂଚଳ

- ୧। କ- ୨, ଖ- ୨, ଗ- ୧, ଘ- ୩, ଙ- ୨,
ଚ- ୧, ଛ- ୨, ଜ- ୧, ଝ- ୨, ଞ- ୧,
ଟ- ୨, ଠ- ୧, ଡ- ୨, ଢ- ୩, ଣ- ୧,
ତ- ୧, ଥ- ୩, ଦ- ୨, ଧ- ୩, ନ- ୨,
ପ- ୧, ଫ- ୨, ବ- ୪।
- ୨। କ- ୨, ୩, ୪ । ଖ- ୨, ୩, ୪ । ଗ- ୧, ୨, ୪ ।
ଘ- ୨, ୪, ୪ । ଙ- ୨, ୩ । ଛ- ୧, ୩ ।
- ୩। କ- ହୁୟାଂହୁ । ଖ- ଥେମ୍ବୁପ ଗ- କଂଗୋ ବା ନୀଳନଦୀ
ଘ- ବ୍ରହ୍ମବେଶ ।
- ୪। କ- ✓ ଖ- ✓ ଗ- ✓ ଘ- ✓ ଙ- ✓
ଚ- X ।
- ୫। କ - ଇରାବତୀ , ମିସିସିପି ଖ- ଜାରା ସୁମାତ୍ରା
ଗ- ବଙ୍ଗୋ , କଲିକତା , ମାଡ୍ରାସ ।
ଘ- ବିଷୁବ ଅରଣ୍ୟ ଅଂଚଳ, ହିମାଳୟ ପର୍ବତ ଶ୍ରେଣୀ ।
ଙ - ଗ୍ରୀନ୍‌ଲ୍ୟାଣ୍ଡ , ସାଇବେରିଆ ।

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LEARNING EXPERIENCES

PRE-BROADCAST ACTIVITIES

Method: Question-Answer

(As the technique of team teaching will be followed in the post-broadcast session, the subject teacher would come with one of his friends (teacher) to the class).

Teachers' Activities	Expected Activities of the Students
<p>Subject Teacher:</p> <p>Students! you are welcome to the 3rd programme of our Geography series of school broadcast.</p> <p>To-day my friend Mr. _____ has come. He will also listen with us. I hope, you all will enjoy it. Before we begin, let me ask you a few questions.</p>	
Q. What was our first programme?	Prakrutim Chiria Khana.
Q. What did we listen through that programme?	About birds and animals.
Q. Where are more animals seen in the world?	In Africa.
Q. Why more animals are seen in Africa, why not more in other continents?	Dense forests are the factors for which more animals live there.
Q. Do you mean to say that all animals like to live in dense forests?	No.

Teachers' Activities	Expected Activities of the Students
Q. Then, which are the animals live in dense forests? What about others like goats, cattle etc.? Where do they stay?	Lion, Tiger, Rhino, etc. These animals do not stay in forests because, other wild animals may eat them.
Q. What about human beings? Do they stay in forests? Why not?	No. There is danger of these animals. Besides, facilities are not there.
Q. Where do human beings like to stay?	Villages, cities, etc.
Q. (To 3/4 students) where do you like to stay? Why?	In the city/Village - Because of the facilities.
Q. (To student who likes to stay in a city) What are the advantages of city life over village life?	Medical facilities, entertainment, educational facilities, good communication, etc.
<p>It is a fact that now-a-days more and more people are attracted towards cities. Population in the cities are growing day by day. They are over-populated. But still there are places where people do not like to stay. Can you tell some of them?</p>	
<p>Hills, nondeveloped lands, etc.</p> <p>In this world, there are places where many people live and also there are areas where very few people stay. These are called thickly populated and thinly populated areas respectively. To-day's programme is on that only "Thickly and thinly populated areas of the world". (To be written on the board) Please listen to the programme and write the key points coming through.</p> <p>(Teacher would tune the radio).</p>	

ACTIVITIES DURING THE BROADCAST

Method: Radiovision.

Aids: The following slides would be projected in synchronisation with the radio programme.

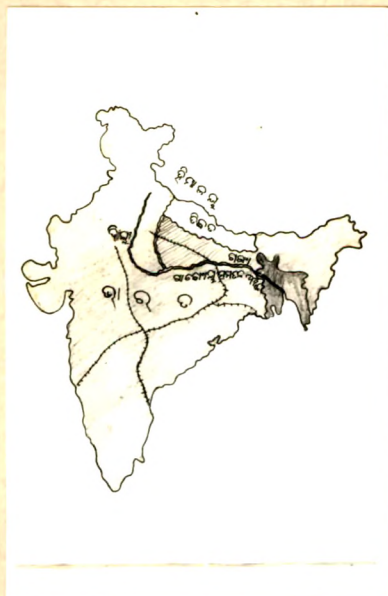
1. North India with the rivers Ganga & Yamuna
2. Map of China with the rivers Howang Ho, Yang ^{-Tse-}kiang and Sikiyang.
3. England with the city of London & river Thames.
4. Map of Africa with river Nile, Victoria Lake, etc.
5. Pyramids in Egypt
6. River Iravadi in Burma
7. Mississippi in U.S.A.
8. Asia - India, China, Japan
9. Indonesia - Java, Sumatra, Bali
10. Europe - Great Britain, France, West Germany, Belgium
11. Equatorial forest
12. Tundras - Canada, Greenland, Siberia.
13. Himalayas, Andrews, Tibbet.

Teaching Points Through the Radio.				Visuals
1	Many people live in the northern India....			Slide No.1
	x x x			x x
2	What are the main rivers flowing through China?			Slide No.2
	x x x			x x
3	The river Tames flows through England. See that in the map....			Slide No.3
	x x x			x x

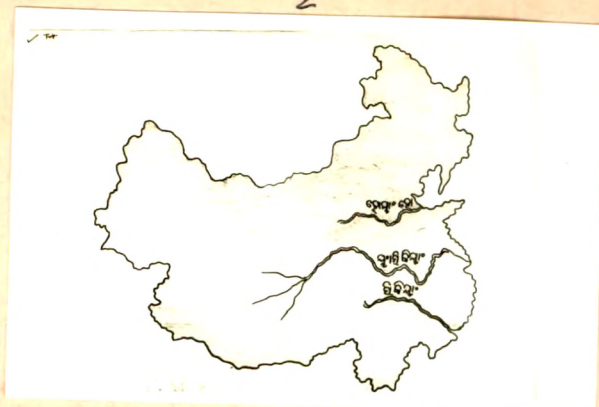
Teaching Points Through the Radio				Visuals
4	Nile is the famous river in Africa.....			Slide No.4
	x x x			x x
5	Pyramids are seen in the river valley areas of Nile.....			Slide No.5
	x x x			x x
6	Irawadi river valley in Burma is thickly populated.....			Slide No.6
	x x x			x x
7	Mississipi valley of America.....			Slide No.7
	x x x			
8	Which are the countries of Asia thickly populated?			Slide No.8
	x x x			x x
9	In the past the Sadhavas were going to Java, Sumatra			Slide No.9
	x x x			x x
10	See, in the west of Europe, Great Britain, France,			Slide No.10
	x x x			x x
11	Equatorial forests are thinly populated...			Slide No.11
	x x x			x x
12	In Tundras ^a few people live.....			Slide No.12
	x x x			x x
13	In the Himalayas.....			Slide No.13
	x x x			x x

(Photographs of the slides developed by the investigator are given in the following pages).

1



2



3



4



5



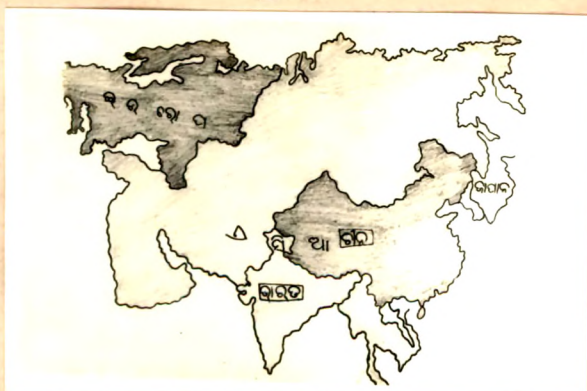
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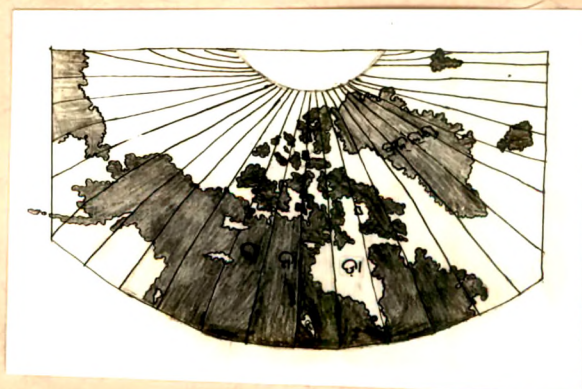
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12



POST BROADCAST ACTIVITIES

Method: Team Teaching.

Two teachers, through their arguments will discuss for a few minutes about the topic they all listened through the radio. After this is over, the students will be asked to clarify their doubts (if any) by asking questions to the teachers.

Teacher's Activities	Expected Students' Activities
<p>Geography Teacher :</p> <p>(G.T.): Well students! you have just listened why some places become thickly populated and some other thinly populated. Mr. _____ my friend, a History teacher has also listened with us. Well Mr. _____, how do you find this programme?</p>	<p>Students observe</p>
<p>History Teacher :</p> <p>(H.T.) Well, it was fine. But I would like to ask you one thing.</p>	
<p>G.T.: Yes, yes, you are most welcome. Please do.</p>	
<p>H.T.: In the pre-broadcast session, you told that cities have become over-populated. But our census statistics says that India is a country of villages and more than 80% of people live in villages. How do you justify your statement?</p>	
<p>G.T.: By saying that, I did not mean that villages are not thickly populated. What you are saying is right. But because of the facilities available in the cities, more and more people are attracted towards the cities. That's why the population in the cities is going up.</p>	

Teacher's Activities	Expected Students' Activities
<p>H.T.: I don't think that only because of the facilities, people are attracted to live in cities. There are some other reasons also.</p>	
<p>G.T.: Would you please high light some of them?</p>	
<p>H.T.: Oh, yes. It is my pleasure to do so. In the cities, the administrative offices, courts, schools, colleges, factories, etc. are situated. It is not that first the city is built and then these organisations start. First, in a small area one or two of these organisations start. People are appointed to work. For their stay houses are constructed. For getting their necessities, shops opened, markets get established. People start doing small small business. For transportation, road construction goes on. For the children of the employees, educational institutions opened. People from distant villages also come on pleasure trips. Like this, the population goes on. So, establishment of private and public avenues is also one of the reasons for thick population of a place. If in villages we start opening new avenues, there also population will go on increasing.</p>	<p>Students observe the teachers.</p>
<p>G.T.: That's right. But how is it that most of our thickly populated areas belong to villages?</p>	

Teacher's Activities	Expected Students' Activities
<p>H.T.: You see, food is the chief concern for human living. You must have read in history that our civilizations started at river banks. When man could get food by cultivating lands, more and more people settled near the rivers as the river valleys are fertile. In this programme, we have listened that the Ganges valley, Irawadi valley of Burma, Mississippi valley, river valley of Nile in Africa are high yielding. Climate is also good. So, it is natural for the people preferring to live there. On the other hand, who will live near the hills, mountains, forests etc? How will they cultivate land? Where from will they get water and other necessities?</p>	
<p>G.T.: So, to me, the thick population a place depends upon the climate, nature of the land, transportation facilities, establishment of industries, etc.</p>	
<p>H.T.: The thin population of a place is also due to various causes. Snow fall areas, unhealthy places, hilly regions, places having unfertile lands, very hot regions, very cold regions, etc. are thinly populated areas. It is also very difficult to settle in those places so that the population can grow.</p>	
<p>G.T.: Thank you Mr. _____ for your enlightened points. (To students) I don't know whether you are confused through our discussion or you have well understood the topic. If you have any any any doubt, please ask. We will clarify them. (Teacher would clarify the doubts of students, if any.)</p>	<p>Students ask question to clarify their doubts.</p>
<p>Please read this topic again at home. To-morrow we will have the test. Let us see who will secure the highest mark. Let us depart. Thank you all.</p>	

DEVELOPING STRATEGIES FOR EFFECTIVE UTILIZATION OF
GEOGRAPHY BROADCAST PROGRAMMES FOR GRADE-VII

Title: KRISHNA HIRAKA (Black Diamond)

Overview

Students will learn about the mineral coal. The following aspects are covered through the programme :

1. Formation of coal
2. Extraction of coal
3. Inside of coalmine
4. Forms of coal
5. Uses of coal
6. By-products of coal and their uses.

Form of Broadcast: Discussion

(Teacher narrates her experience
in a coalmine to the students).

CONTENT SEQUENCE

1. Coal is a very important mineral.
2. Coal is used as fuel.
3. Coal is called 'Black Diamond'.
4. There are coalmines in different parts of India, like in Orissa at Talcher and Rampur; in Bihar at Jharia, Giridi, Ramnagar, Bokaro and Asansol; in West Bengal at Raniganj and Barnapur.
5. (a) Use of coal as fuel came into light during mid eighteenth century as there was shortage of fire wood.
(b) Abraham Darle first used coal as fuel.
(c) Coal was first used for melting iron.
(d) Iron foundries were established near the coalmines due to easy availability of coal.
6. Coal settles down inside the earth in different layers. The plants buried under the earth are converted into coal due to the effect of temperature and pressure inside the earth and so it is the by-product of the plants.
7. Coal extraction is a long procedure and involves opening the mine by using explosives, cutting coal from earth with the help of special machines viz. diggers inside the coalmine, transferring the cut ore to surface using 'dragger' machines.
8. A helmet to protect the head, a head light to light the way and a stick for support are essential inside the mine.
9. (a) The quality of coal is known from the amount of carbon it contains. Good coal produces more heat when it burns.

- (b) Anthracite, Bituminous, Lignite, Peat etc. are the various types of coal. Anthracite is the coal of best quality. Bituminous coal produces more smoke when it burns and is used in railway engines. Peat coal is very soft and its colour is brown. It is the coal of lowest order.
10. (a) Coal, alongwith water, is used for producing steam which is used in rail engines, steam boats etc.
- (b) Electricity generated by using coaldust is called thermal electricity. Due to easy conveyance of coal, thermal power stations are installed nearer to the coalmines. By the help of belt, coal is carried to the thermal power station from the mine.
11. Coal-tar, saccharin, pitch, coalgas etc. are produced from coal.
- (a) Coal-gas is used for cooking purposes.
- (b) Coal-tar is used in painting bamboos, planks, etc. in order to protect them from insects and depreciation.
- (c) Pitch is used for road construction.
- (d) From coal-tar, naphthalene, different colours, fertiliser, phenol, vaseline, carbolic acid, saccharin etc. are produced.

EXPECTED TERMINAL BEHAVIOURS

Students will be able to

- 1.1 give tick mark to the statement "coal is a mineral".
- 2.2 recognise coal as a fuel.
- 3.3 recognise the other name of coal.
- 4.4 recall the names of the famous coal mines in Orissa, Bihar and West Bengal.
- 5.5 recognise the period when the use of coal came to the light.
- 5.6 point out the reason for use of coal as fuel.
- 5.7 recognise the name of the person who first used coal as fuel.
- 5.8 point out the specific purpose for which coal was used first.
- 5.9 point out the reason for installation of iron foundries nearer to coalmines.
- 6.10 recognise the state of coal inside the earth.
- 6.11 explain how coal is formed inside the earth.
- 6.12 give tick mark to the statement "Coal is the by-product of plants".
- 7.13 explain how coal is brought out when the source is identified.
- 7.14 recognise the process of coal cutting.
- 7.15 point out the machines used inside the mine for cutting and transferring coal.
- 8.16 recognise the equipment\$ needed while going inside a mine and reason out the need for them.
- 9.17 arrange the names of different forms of coals in order of their quality.

- 9.18 explain how coal of good quality is identified.
- 9.19 recall the properties of each term of coal.
- 9.20 describe different types of coals.
- 10.21 state/recognise different uses of coal\$.
- 10.22 state the process of steam production and its use.
- 10.23 explain thermal electricity and reason out the
installation of thermal power stations nearer to
coalmines.
- 10.24 recognise the process by which coal is carried
to the thermal power station.
- 10.25 recognise the production process of thermal
electricity.
- 11.26 name by recall the by-products of coal and
state their uses.

CRITERION TEST

- 1.1.1 Coal is a mineral. ()
(Give a '✓' if the statement is true).
- 2.2.2 Which of the following belongs to the category of wood, gas, cowdung in respect of its use as a fuel?
- (i) Manganese ()
 - (ii) Coal ()
 - (iii) Electric heater ()
 - (iv) Cotton ()
- 3.3.3 What is the other name of coal?
- (i) Black diamond ()
 - (ii) Krishna Karpasa ()
 - (iii) Diamond ()
 - (iv) Gold ()
- 4.4.4 _____ is the famous coalmine in Orissa.
- 4.4.5 Name the coalmine situated in the Sambalpur district.
- (i) Ramnagar ()
 - (ii) Ramprasad ()
 - (iii) Rampur ()
 - (iv) Baragarh ()
- 4.4.6 Write atleast the names of two coalmines in Bihar.
- 4.4.7 Write the name of one coalmine in West Bengal.
- 5.5.8 When did the use of coal come to light?
- During
- (i) the 19th century. ()
 - (ii) the 20th century. ()
 - (iii) the 17th century. ()
 - (iv) the 18th century. ()

- 5.6.9 Why was the use of coal felt?
- (i) There was no other fuel ()
 - (ii) There arose a lack of availability of wood. ()
 - (iii) It was known from research findings that coal can be used as fuel. ()
 - (iv) Since the fuel of wood was injurious to health, people tried to use it. ()
- 5.7.10 Who used coal as fuel for the first time?
- (i) Abraham Darle ()
 - (ii) Abraham Lodi ()
 - (iii) Abraham Lincoln ()
 - (iv) Newton ()
- 5.8.11 For what purpose the fuel of coal was used first?
- (i) For preparing food. ()
 - (ii) For killing the insects ()
 - (iii) For melting iron ()
- 5.9.12 The iron foundries were established near coalmines because
- (i) there was no facility in other places ()
 - (ii) coal was available there easily. ()
 - (iii) iron ~~was~~ ^{was} plenty available near the coal mines. ()
 - (iv) there was facility for transferring coal from coalmines. ()
- 6.10.13 Coal settles down inside the earth
- (i) in liquid form. ()
 - (ii) in different layers in solid form ()
 - (iii) in gaseous form ()
- 6.11.14 Write in two or three lines how coal is formed inside the earth?
- 6.12.15 Coal is the by-product of plant ()
(Put a '✓' if the statement is true.)

- 7.13.16 Write in two or three lines how a coalmine is opened?
- 7.14.17 How coal is cut inside the mine?
- (i) With the help of tractor. ()
 - (ii) With the help of special machines meant for coal cutting. ()
 - (iii) With the help of an axle. ()
- 7.15.18 Which of the following machines are utilized inside the coalmine for digging and transferring coal?
- (i) Gun () (iv) Lift ()
 - (ii) Fractor () (v) Draglen ()
 - (iii) Digger () (vi) Grinder ()
- 8.16.19 Which of the following items are required for going inside the coal mine?
- (i) An ordinary cap () (iv) Raincoat ()
 - (ii) Helmet () (v) An Umbrella ()
 - (iii) Headlight () (vi) A stick ()
- 8.16.20 Why is helmet used inside the mine?
- (i) To protect the head from accidents. ()
 - (ii) To protect the head from sun-rays. ()
 - (iii) Its looks nice. ()
- 8.16.21 Why is headlight used inside the mine? ()
- (i) It is the instruction from the mine owner. ()
 - (ii) It looks nice. ()
 - (iii) It is dark inside the mine. ()
- 9.17.22 Write the names of different forms of coals in order of quality.
- 9.18.23 How is the coal of best quality identified?
- 9.18.24 _____ is the coal of best quality.
- 9.19.25 _____ coal yields maximum smoke when it burns.
- 9.19.26 _____ coal is used in the rail-way engine.
- 9.20.27 Give the description of peat coal?

- 10.21.28 How is steam produced?
 (i) With the help of water only. ()
 (ii) By using coal only. ()
 (iii) By using both water and coal. ()
- 10.22.29 Write two uses of steam.
- 10.23.30 Explain thermal electricity.
- 10.23.31 Why are the thermal power stations installed near the coal mines?
 (i) For getting electric light inside the mine. ()
 (ii) There is no facility else where. ()
 (iii) To get coal easily for the thermal station. ()
- 10.24.32 How is coal carried from the coalmine to the thermal station?
 (i) With the help of belt. ()
 (ii) People carry on their heads. ()
 (iii) By train. ()
- 10.25.33 How is thermal electricity produced?
 (i) By using coal of big pieces. ()
 (ii) By using coal dust. ()
 (iii) By applying electricity to coal. ()
- 11.26.34 Tick out atleast three products of coal.
 (i) Gold () (iv) Saccharin ()
 (ii) Coal tar () (v) Pitch ()
 (iii) Opium () (vi) Sugar ()
- 11.26.35 What is the purpose for which coal gas is used?
 (i) For cooking ()
 (ii) To protect the filament inside the electric bulb. ()
 (iii) To prepare oxygen. ()

- 11.26.36 For what purpose is coal tar used?
- (i) To kill insects like white-ants. ()
 - (ii) To build roads. ()
 - (iii) For painting the wood and bamboos
in order to protect them from
insects. ()
- 11.26.37 For what purpose is pitch used?
- (i) To build roads. ()
 - (ii) To paint wood and bamboos. ()
 - (iii) To kill insects like white-ants. ()
- 11.26.38 Tick out two products of coal tar?
- (i) Gold ()
 - (ii) Phenol ()
 - (iii) Manure ()
 - (iv) Carbon ()
 - (v) Vaseline ()
 - (vi) Sugar ()

(Test is to be arranged according to the item types accompanying the required instructions).

ଆ କା ଶ ବା ଶୀ

ଦିବ୍ୟାଳୟ କାର୍ଯ୍ୟକ୍ରମ
ମାନ ନିର୍ଦ୍ଧାରଣ ପରୀକ୍ଷା

ବିଷୟ : କୃଷ୍ଣ ହୀରକ

ନାମ	ରୋଲ ନଂ :	ତାରିଖ :
<hr/>		
୧। ନିମ୍ନରେ କେତେ ଗୁଡିଏ ପ୍ରଶ୍ନ ଏବଂ ସେଗୁଡିକର ସମ୍ଭାବ୍ୟ ଉତ୍ତର ଦିଆଯାଇଛି । ଯେଉଁ ଉତ୍ତରଟି ତୁମେ ଠିକ୍ ବୋଲି ମନେ କରୁଛୁ , ତାହାର ଡାହାଣରେ ଥିବା ବ୍ୟବସ୍ଥା ମଧ୍ୟରେ (✓) ଚିହ୍ନ ଦିଅ ।		
(କ) ନିମ୍ନରେ ଦିଆ ଯାଇଥିବା ଉପାଦାନ ମଧ୍ୟରୁ କେଉଁଟି କାଠ, ଖାସ ଏବଂ ଗୋବର ଧରି ଜାଳେଣୀ ରୂପେ ବ୍ୟବହାର କରାଯାଏ ?		
(୧) ମାଂଗାନିଜ	()	
(୨) କୋଇଲା	()	
(୩) ବ୍ରେସ୍‌ବୁଡିକ ଟୁଲି	()	
(୪) ଟୁଲି	()	
(ଖ) କୋଇଲାର ଅନ୍ୟନାମ କି'ଣ ?		
(୧) କୃଷ୍ଣ ହୀରକ	()	
(୨) କୃଷ୍ଣ କାର୍ଯ୍ୟାସ	()	
(୩) ହୀରା	()	
(୪) ସ୍ୱର୍ଣ୍ଣ	()	
(ଗ) ଓଡିଶାର ସମ୍ଭଲପୁର ଜିଲ୍ଲାରେ କେଉଁଠି କୋଇଲା ଖଣି ଅଛି ?		
(୧) ରାମପୁର	()	
(୨) ରାମ ନଗର	()	
(୩) ରାମ ଧ୍ରୁସାଦ	()	
(୪) ବରଗଡ	()	
(ଘ) କୋଇଲାର ବ୍ୟବହାର କେବେ ଲୋକ ଲୋଚନକୁ ଆସିଲା ?		
(୧) ଉନବିଂଶ ଶତାବ୍ଦୀରେ	()	
(୨) ଦିଂଶ ଶତାବ୍ଦୀରେ	()	
(୩) ଅଷ୍ଟାଦଶ ଶତାବ୍ଦୀରେ	()	
(୪) ସପ୍ତଦଶ ଶତାବ୍ଦୀରେ	()	

- (କ) କୋଇଲୀକୁ ଜାଳେଣୀ ରୂପେ ବ୍ୟବହାର କରିବାର ଆବଶ୍ୟକତା କାହିଁକି ଅନୁଭବ କରାଗଲା ?
- (୧) ସେ ସମୟରେ ଅନ୍ୟ କୌଣସି ଜାଳେଣୀ ନ ଥିଲା ()
- (୨) ଆବଶ୍ୟକତା ଅନୁସାରେ ଜଳିବାକୁ କାଠ ମିଳିଲା ନାହିଁ ()
- (୩) ଗବେଷଣାର ଜଣାଗଲା ଯେ କୋଇଲୀକୁ ଜାଳେଣୀରୂପେ ବ୍ୟବହାର କରାଯାଇ ପାରିବ ()
- (୪) କାଠ ଜାଳେଣୀ ସ୍ୱାସ୍ଥ୍ୟକ୍ଷେମେ ଯତିକାରକ ହେବାରୁ କୋଇଲୀକୁ ଜାଳେଣୀରୂପେ ବ୍ୟବହାର କରାଗଲା ()
- (ଚ) କୋଇଲୀକୁ ଧୂଆଁମେ କିଏ ଜାଳିଥିଲେ ବ୍ୟବହାର କରିଥିଲେ ?
- (୧) ଓଡ଼ିଆମାନେ ତାଲେ ()
- (୨) ଆସାମୀୟ ଲୋକ ()
- (୩) ଆସାମୀୟ ଲିକ୍ତମାନେ ()
- (୪) ମିଉଟମାନେ ()
- (ଛ) କୋଇଲୀକୁ ଧୂଆଁମେ କ'ଣ ଧାଇଁ ବ୍ୟବହାର କରାଯାଇଥିଲା ?
- (୧) ଖାଦ୍ୟ ସାମଗ୍ରୀ ଧୂସୁଟ କରିବା ପାଇଁ ()
- (୨) ଜୀବାଣୁ ମାରିବା ପାଇଁ ()
- (୩) ଲୁହା ଚରକାଇବା ପାଇଁ ()
- (ଜ) କୋଇଲୀ ଖଣି ଗୁଡ଼ିକପାଖରେ କାହିଁକି ଲୌହଶାଳମାନ ଗଢି ଉଠିଥିଲା ?
- (୧) ଅନ୍ୟ ସ୍ଥାନରେ ସୁବିଧା ନ ଥିଲା ()
- (୨) ସେଠାରେ କୋଇଲା ସହଜ ଏବଂ ସୁବିଧାରେ ମିଳିଲା ()
- (୩) କୋଇଲା ଖଣି ପାଖରେ ଲୁହା ପ୍ରଚୁର ପରିମାଣରେ ମିଳୁଥିଲା ()
- (ଝ) କୋଇଲା ଉପି ତଳେ କି ଅବସ୍ଥାରେ ଥାଏ ?
- (୧) ତରଳ ଅବସ୍ଥାରେ ()
- (୨) ସ୍ତର ସ୍ତର ହୋଇ କଠିନ ଅବସ୍ଥାରେ ()
- (୩) ଗ୍ୟାସୀୟ ଅବସ୍ଥାରେ ()
- (ଝି) ଖଣି ଭିତରେ କୋଇଲା କିପରି କଟାଯାଏ ?
- (୧) ଟ୍ରାକ୍ଟର ସାହାଯ୍ୟରେ ()
- (୨) କୋଇଲା କାଟିବାପାଇଁ ଥିବା ସ୍ୱତନ୍ତ୍ର ମେସିନ୍ ସାହାଯ୍ୟରେ ()
- (୩) କୋଡି ଏବଂ କୋବାଳ ସାହାଯ୍ୟରେ ()

- (ଫ) ଖଣି ମଧ୍ୟରେ ଟୋପି (ହେଲୁମେଟ) କାହିଁକି ବ୍ୟବହାର କରାଯାଏ ?
- (୧) ମୁଣ୍ଡକୁ ଡେଇଁବା ଦୁର୍ଘଟଣାରୁ ରକ୍ଷା କରିବା ପାଇଁ ()
- (୨) ସୂର୍ଯ୍ୟ ତାପରୁ ରକ୍ଷା ପାଇବା ପାଇଁ ()
- (୩) ଖଣି ଭିତର ଅଧାରୁଆ ହୋଇଥିବାରୁ ()
- (ଠ) ଖଣି ମଧ୍ୟରେ ହେଉ ଲାଇଟ କାହିଁକି ବ୍ୟବହାର କରାଯାଏ ?
- (୧) ଏହା ଖଣି ମାଲିକ-କର ନିର୍ଦ୍ଦେଶ ()
- (୨) ଏହା ସୁନ୍ଦର ହେଉଥାଏ ()
- (୩) ଖଣି ଭିତର ଅଧାରୁଆ ହୋଇଥିବାରୁ ()
- (ଡ) ବାଷ୍ପୀୟ ଶକ୍ତି କିପରି ସୃଷ୍ଟି କରାଯାଏ ?
- (୧) କେବଳ ଜଳ ବ୍ୟବହାର କରି ()
- (୨) କେବଳ କୋଇଲା ବ୍ୟବହାର କରି ()
- (୩) ଭଲ ଯୁ ଜଳ ଓ କୋଇଲାକୁ ବ୍ୟବହାର କରି ()
- (ଢ) କୋଇଲା ଖଣି ଗୁଡିକ ପାଖରେ କାହିଁକି ତାପନ ବିଦ୍ୟୁତକେନ୍ଦ୍ର ପ୍ରତିଷ୍ଠା କରାଯାଇଥାଏ ?
- (୧) ଖଣି ମଧ୍ୟକୁ ଦିନିକି ଆଲୁଅ ନେବା ପାଇଁ ()
- (୨) ଅନ୍ୟ କେଉଁଠାରେ ସେପରି ସୁବିଧା ନ ଥାଏ ()
- (୩) ସୁବିଧାରେ ତାପନ ବିଦ୍ୟୁତ କେନ୍ଦ୍ର ନିର୍ମାଣ କୋଇଲା ପାଇବା ପାଇଁ ()
- (ଣ) କୋଇଲା ଖଣି ପାଖରୁ ତାପନ ବିଦ୍ୟୁତକେନ୍ଦ୍ର ପାଖକୁ କିପରି କୋଇଲା ଯାଏ ?
- (୧) ବେଲ୍ଟ ସାହାଯ୍ୟରେ ()
- (୨) ଲୋକମାନେ ମୁଣ୍ଡରେ ବୋହି ନିଅନ୍ତି ()
- (୩) ରେଲଗାଡି ସାହାଯ୍ୟରେ ()
- (ତ) ତାପନ ବିଦ୍ୟୁତ କିପରି ପ୍ରସ୍ତୁତ କରାଯାଏ ?
- (୧) ବଡ଼ ବଡ଼ କୋଇଲା ଖଣି ବ୍ୟବହାର କରି ()
- (୨) କୋଇଲା ଗୁଣ୍ଡ ବ୍ୟବହାର କରି ()
- (୩) କୋଇଲାରେ ଦିନିକି ଗୁଣ୍ଡ ସଂଯୋଗ କରି ()

(ଅ) କୋଇଲା ଗ୍ୟାସ କଣ ପାଇଁ ବ୍ୟବହାର କରାଯାଏ ?

(୧) ଗୋଟିଏ କରିବା ପାଇଁ ()

(୨) ବୈଦ୍ୟୁତିକ ପ୍ରଦୀପ ମଧ୍ୟରେ ଥିବା ପିଲାମାନଙ୍କୁ ରକ୍ଷା କରିବା ପାଇଁ ()

(୩) ଅମୁକାନ୍ତ ପ୍ରସ୍ତୁତ କରିବା ପାଇଁ ()

(ବ) ଆଲକାହୋଲ କ'ଣ ପାଇଁ ବ୍ୟବହାର କରାଯାଏ ?

(୧) ଉଚ୍ଚ ପ୍ରଭୃତି କୀଟ ମାନଙ୍କୁ ମାରିବା ପାଇଁ ()

(୨) ରାସ୍ତା ଚିଆରି କରିବା ପାଇଁ ()

(୩) କାଠ ବାଉଁଶର ରଙ୍ଗକରି ସେଗୁଡ଼ିକୁ ସ୍ଥୟ ରକ୍ଷା କରିବା ପାଇଁ ()

(ଧ) ପିଚ୍ କ'ଣ ପାଇଁ ବ୍ୟବହାର କରାଯାଏ ?

(୧) ରାସ୍ତା ଚିଆରି କରିବା ପାଇଁ ()

(୨) କାଠ ବାଉଁଶର ରଙ୍ଗକରି ସେଗୁଡ଼ିକୁ ସ୍ଥୟ ହେବାକୁ ରକ୍ଷା କରିବା ପାଇଁ ()

(୩) ଉଚ୍ଚ ପ୍ରଭୃତି କୀଟ ପତଙ୍ଗ ମାନଙ୍କୁ ମାରିବା ପାଇଁ ()

୨। ନିମ୍ନ ପ୍ରଶ୍ନ ଗୁଡ଼ିକରେ ଏକାଧିକ ଠିକ୍ ଉତ୍ତର ରହିଛି । ସେଗୁଡ଼ିକର ତାହାଣରେ ଥିବା ବ୍ୟବହାର ମଧ୍ୟରେ (✓) ଠିକ୍ ଦିଅ : -

(କ) ନିମ୍ନରେ ଦିଆଯାଇଥିବା ଯନ୍ତ୍ର ଗୁଡ଼ିକ ମଧ୍ୟରୁ କେଉଁ ଗୁଡ଼ିକ କୋଇଲା କାଟିବା ଏବଂ ସ୍ଥାନାନ୍ତରୀତ କରିବାରେ ବ୍ୟବହାର କରାଯାଏ ?

(୧) ବ୍ୟୁକ୍ ()

(୨) ଟ୍ରାକ୍ଟର ()

(୩) ଡିଗର ()

(୪) ଲିଫ୍ଟ ()

(୫) ଡ୍ରାଗର ()

(୬) ଗ୍ରାଉଣ୍ଡର ()

(ଖ) କୋଇଲା ଖଣି ଭିତରକୁ ଯିବାକୁ ହେଲେ କଣ କଣ ସାହାଯ୍ୟରେ ନେଇ ଯିବାକୁ ହୁଏ ?

(୧) ସାଧାରଣ ଟୋପି ()

(୨) ଲୁହା ଚିଆରି ଟୋପି ()

(୩) ହେଡ୍ ଲାଇଟ ()

(୪) ବର୍ଷାତି ()

(୫) ଛତା ()

(୬) ଖଣ୍ଡେ ବାଟି ()

(ଗ) ଚିନିଗୋଟି କୋଇଲା ଜାତ ପଦାର୍ଥର ନାମ ଦିଅ :-

(୧) ସ୍ୱର୍ଣ୍ଣ ()

(୨) ଆଲକାତରା ()

(୩) ଅସିମ ()

(୪) ଶାକାରିନ ()

(୫) ପିତ୍ତ ()

(୬) ଚିନି ()

(ଘ) ଆଲକାତରାର ପ୍ରସ୍ତୁତ ହେଉଥିବା ୨ଟି ପଦାର୍ଥର ନାମ ଦିଅ :-

(୧) ସ୍ୱର୍ଣ୍ଣ ()

(୨) ପିନାକଲ ()

(୩) ସାର ()

(୪) କାର୍ବନ ()

(୫) ଭେସ୍ପିନ ()

(୬) ଚିନି ()

୩। ନିମ୍ନରେ ଦତ୍ତ ପ୍ରଶ୍ନ ଗୁଡ଼ିକର ଉତ୍ତର ସଂକ୍ଷେପରେ ଲେଖ :-

(କ) ବିହାରରେ ଥିବା କୌଣସି କୋଇଲା ଖଣିର ନାମ ଲେଖ ।

(ଖ) ପଶ୍ଚିମ ବଙ୍ଗରେ ଥିବା ଯେ କୌଣସି ଗୋଟିଏ କୋଇଲା ଖଣିର ନାମ ଲେଖ ।

(ଗ) ମାଟି ଭିତରେ କୋଇଲା କିପରି ସୃଷ୍ଟି ହୁଏ ?

(ଘ) କୌଣସି ସ୍ଥାନରେ କୋଇଲାର ସଂଧାନ ନେବାପରେ ସେଠାରୁ କି ଉପାୟରେ କୋଇଲା ବାହାର କରାଯାଏ ?

(ଙ) ବିଭିନ୍ନ ପ୍ରକାର କୋଇଲାର ନାମ ସେମାନଙ୍କ ଉତ୍କୃଷ୍ଟତା ଅନୁସାରେ ସଜାଇ ଲେଖ ।

(ଚ) କୌଣସି ଏକ କୋଇଲା ଉତ୍କୃଷ୍ଟ ଧରଣର ବୋଲି ଆମେ କିପରି ଜାଣିବା ?

(ହ) ପିତୃ କୋଇଲାର ଏକ ସଂକ୍ଷିପ୍ତ ବିବରଣୀ ଦିଅ ?

(ଜ) ବାସ୍ତବିକ ଗଣ୍ଡିର ଦୁଇଟି ବ୍ୟବହାର ଲେଖ ?

(ଝ) ତାପନ ବିଦ୍ୟୁତ କାହାକୁ କହୁଛି ?

୪। ନିମ୍ନରେ ଦିଆ ଯାଇଥିବା ଉକ୍ତି ଗୁଡ଼ିକ ମଧ୍ୟରୁ କେତେକ ଠିକ୍ ଏବଂ କେତେକ ଭୁଲ୍ ଉକ୍ତି ରହିଛି । ଠିକ୍ ଉକ୍ତି ଗୁଡ଼ିକର ତାହାଣରେ (✓) ଚିହ୍ନ ଏବଂ ଭୁଲ୍ ଉକ୍ତି ଗୁଡ଼ିକର ତାହାଣରେ (x) ଚିହ୍ନ ଦିଅ :-

(କ) କୋଇଲା ଗୋଟିଏ ଖଣିଜ ପଦାର୍ଥ ()

(ଖ) କୋଇଲା, ବୃକ୍ଷଭଗ୍ନ ଇତ୍ୟାଦିର ଅବଶେଷରୁ ସୃଷ୍ଟି ()

(ଗ) ଲୋକେ ସାହାଯ୍ୟରେ ଖଣି ମଧ୍ୟରୁ କୋଇଲା ବୁହା ହୋଇ ଆସେ । ()

(ଘ) କୋଇଲାରୁ ତିନେଇ ପ୍ରସ୍ତୁତ କରାଯାଏ ()

୫। ଶୂନ୍ୟ ସ୍ଥାନ ପୂରଣ କର :-

(କ) ଓଡ଼ିଶାର ପ୍ରସିଦ୍ଧ କୋଇଲା ଖଣିମାନ ----- ଠାରେ ଅଛି ।

(ଖ) ଖଣି ମଧ୍ୟରେ କୋଇଲା କଟାଯାଇଥିବା ଯନ୍ତ୍ରର ନାମ ----- ।

(ଗ) ଯେଉଁ ଯନ୍ତ୍ର ସାହାଯ୍ୟରେ କୋଇଲା କଟାହେବା ସ୍ଥାନଠାରୁ ଅଣାଯାଏ ତାହାକୁ ----- କୁହାଯାଏ ।

(ଘ) ----- ସବୁଠାରୁ ଉତ୍କୃଷ୍ଟ ପରଶର କୋଇଲା ।

(ଙ) ----- କୋଇଲା ଜଳିବା ସମୟରେ ଅନ୍ୟାନ୍ୟ କୋଇଲାମାନଙ୍କ ତୁଳନାରେ ଅଧିକ ଧୂଆଁ ସୃଷ୍ଟି କରେ ।

(ଚ) ----- କୋଇଲା ରେଲ ଇଞ୍ଜିନ୍‌ରେ ବ୍ୟବହୃତ ହୁଏ ।

.....

ଆ ଦ ଶି ଉ ଉ ର

କୃଷ୍ଣ-ହୀରକ

୧। କ-୨, ଖ-୧, ଗ-୧, ଘ-୩, ଙ-୨, ଚ-୧,
 ଛ-୩, ଜ-୨, ଝ-୨, ଞ-୨, ଟ-୧, ଠ-୩,
 ଡ-୩, ଢ-୩, ଣ-୧, ତ-୨, ଥ-୧, ଦ-୩,

ଧ-୧,

୨। କ- ୩, ୪ । ଖ-୨, ୩, ୬ । ଗ- ୨, ୪, ୫ । ଘ- ୨, ୫ ।

୩। (କ) ଝରିଆ, ଗିରିଡ଼ି, (ଖ) ରାଣିଗନ୍ଧ, ବର୍ଷପର (ଗ) ପ୍ରରସର ହୋଇ
 ଘ- ବମ୍ବୁ ଦ୍ଵାରା ମାଟି ପଟାଇ । ଙ- ଆହ୍ଲାସାରଟ୍, ଦିବୁମିନସ୍, ଲିଗୁନାଇଟ୍, ପିଟ୍ ।
 ଚ- ଉକ୍ତସ୍ତ୍ର କୋଇଲା ଜାଳିଲେ ବେଶି ତାପ ଦିଏ ଏବଂ କମ୍ ଧୂଆଁ ବାହାରେ ।
 ଛ- ଏହା ଖୁବ୍ ନରମ ଏବଂ ଏହାର ରଙ୍ଗ ଧୂସର ।
 ଜ- ରେଇ ଇଞ୍ଜିନ୍, ବାଷ୍ପୀୟ ଯୋଗ ।
 ଝ- କୋଇଲାକୁ ବ୍ୟବହାର କରି ଯେଉଁ ବିଦ୍ୟୁତ୍ ସୃଷ୍ଟି କରାଯାଏ ।

୪। କ- ✓ ଖ- ✓ ଗ- × ଘ- ×

୫। କ- ତାଳଚେର ଖ- ଡିଗର ଗ- ଡ୍ରାମ୍‌ଲେନ୍,
 ଘ- ଆହ୍ଲାସାରଟ୍ ଙ- ଦିବୁମିନସ୍ ଚ- ଦିବୁମିନସ୍

LEARNING EXPERIENCESPRE-BROADCAST ACTIVITIES

Method: Question-Answer

Teacher's Activities	Students' Activities
<p>Teacher: Hello students! you are welcome to the 4th programme of our Geography series of school broadcast. Mr. _____ please tell me the names of the programmes which we have already listened to on Geography.</p>	<ol style="list-style-type: none"> 1. Nature's Zoo 2. Some important industries 3. Thickly and thinly populated areas.
<p>Q. What did we learn in the programme on Nature's Zoo.</p>	<p>About the wild life of Africa.</p>
<p>Q. What did we learn in the programme on "Industries"?</p>	<p>Cotton industries, Iron & Steel Industries, etc.</p>
<p>Q. Do you know where from we get power for running industries?</p>	<p>From electricity.</p>
<p>Q. Do all the industries run by Electricity?</p>	<p>No, some also run by getting power from coal, diesel, etc.</p>

Teacher's Activities	Students' Activities
Q. Where from this coal comes?	From the mine.
Q. What colour does it have?	Black.
Q. Any body in this class who has gone into a coalmine? (If there is anybody, the teacher would ask him to narrate his experience, otherwise he will ask the next question.)	
Q. How coal is useful to us?	For the train engine, cooking, etc.
Q. Coal is a valuable mineral. Although it is not costly, it is very much useful to us. So it is called "Black Diamond".	
Today's programme is "Black Diamond"	

(Students are to be instructed to write the main points during the broadcast.)

ACTIVITIES DURING THE BROADCAST

Method: Radio-vision

Aids: The following slides will be projected in synchronization with the school broadcast programme.

1. Talcher in the Map of Orissa
2. Chart on different types of coal
3. Chart on coal products
4. Chart on coal tar production
5. Picture of a coal miner
6. Coal carrier
7. Stages of coal
8. (a) Coal cutting Scene-I
(b) Coal cutting Scene-II
9. Miners going to the mine.
10. Thermal power station
11. Coal carrier belt.

Teaching Points Through the Radio	Visuals
1. In Orissa coalmines are seen in Talcher.....	Slide No.1
x x x	x x
2. Coal is classified into four types.	Slide No.2
x x x	x x
3. Saccharin, coal gas, coal tar, pitch are the products of coal.....	Slide No.3
x x x	x x

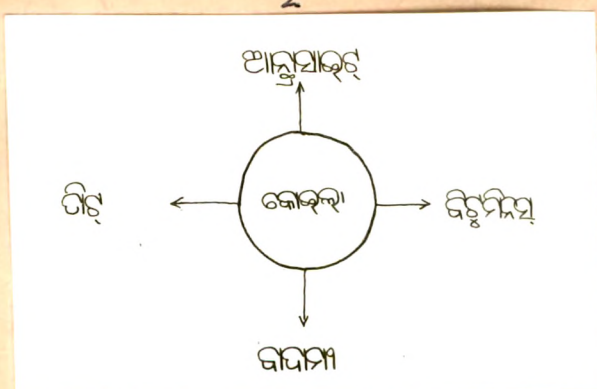
Teaching Points Through the Radio	Visuals
4. From coal-tar, in the chemical process naphthalene, phenol, different colours etc.	Slide No.4
x x x	x x
5. Light on the head of a person.....	Slide No.5
x x x	x x
6. There are wheels fitted into it, coal is being carried.....	Slide No.6
x x x	x x
7. Inside the earth , coal settles in stages.....	Slide No.7
x x x	x x
8. Coal is cut into pieces and.....	Slide No.8(a) followed by Slide No.8(b)
x x x	x x
9. For going inside the mine, a headlight...	Slide No.9
x x x	x x
10. There are vehicles through which coal is brought from the cutting place.	Slide No.10
x x x	x x
11. Thermal stations are situated near coalmines.	Slide No.11
x x x	x x
12. Through belt coal is carried to the thermal station.....	Slide No.12
x x x	x x

(Photographs of the slides developed by the Investigator
are given in the following pages).

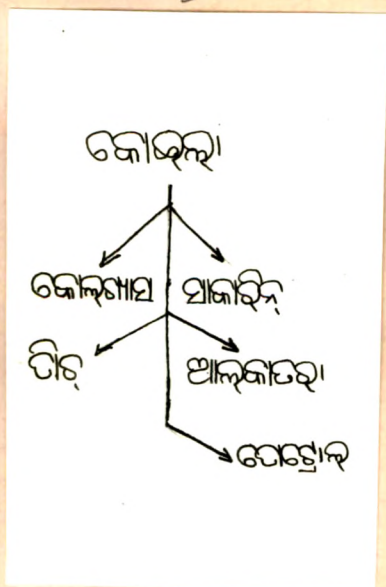
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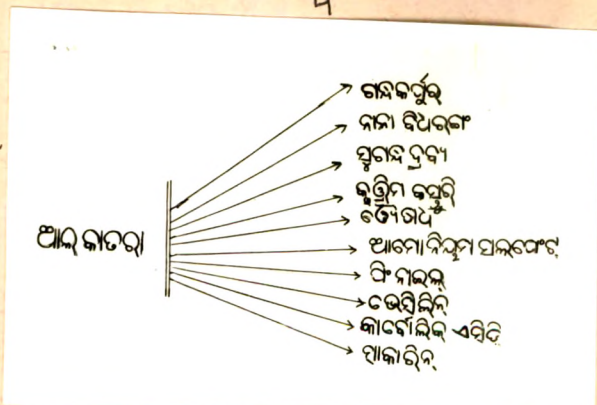
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4



5



6



7



8(a)



8(b)

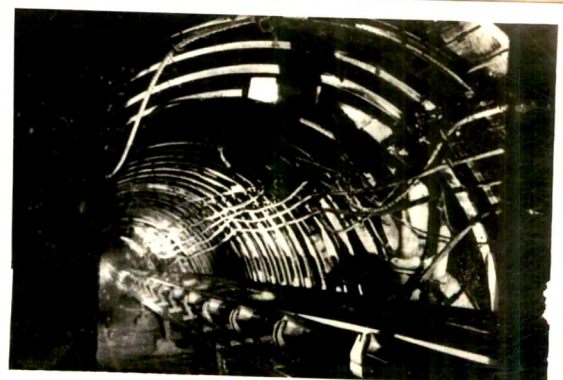


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11



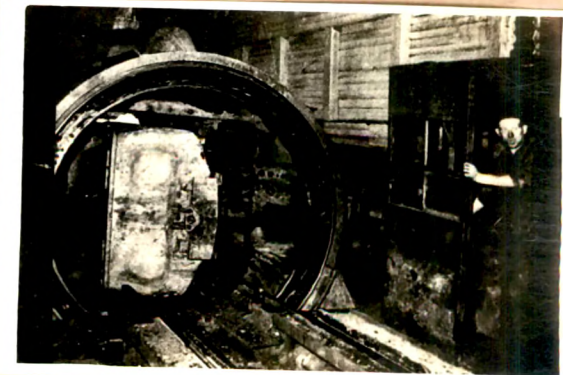
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13



14



POST BROADCAST ACTIVITIES

Method: Discussion.

Teacher: Well students! you have listened to a programme on "Black Diamond". You have also seen some pictures. Now I will show you some more pictures. You may have some clear idea if you see them. Please see them.

(Teacher would show some more slides).

Pictures of

1. Open coal mine (slide No.7)
2. Coal digging machine (slide no.13)
3. Rails inside the mine for movement of coal carriers (slide no.14)
4. Vertical cross section of coalmine (Sl.15)

(Slides shown earlier may be reprojected for explaining different points).

Teacher: You must have written the important points in your note book while listening to the broadcast programmes.

Mr. _____ what are the points you have written?

(To another) What are the points you have written?

(The teacher would focus on those points and discuss along with the students. The following points may be taken a greater care for discussion).

1. Uses of coal
2. Types of coal and their comparison
3. Coal and coal tar products
4. Formation of coal
5. Inside of coalmine
6. Coal cutting machines
7. Thermal power station
8. Hazards of coalminers
9. Difficulty in working inside the mine.

Teacher: Well students! we have listened and discussed the programme on "Black Diamond". To-morrow we will have the test. Please read the topic at home and come prepared.

Thank you all.