

OUR BIG BIG EARTH (LEVEL 2)

Description:	<i>This project teaches the learner about the world and its diversity to help them develop tolerance toward other people and cultures.</i>
Leading question:	<i>How big and diverse is our planet earth?</i>
Age group:	8 to 10
Subjects:	Social Sciences Mathematics
Total time required:	~6 hours over 5 days
Self-guided / Supervised activity:	Supervised
Resources required:	<i>Paper, pencils, coloring pens, & glue</i>
Learning outcomes:	<ul style="list-style-type: none"> ● Understand the concept of percentage ● Use percentage to represent the age and geographical distribution of the earth's population ● Understand and appreciate diversity ● Create a model of the earth ● Discuss how people on the earth are interconnected ● Create a collage to identify and appreciate the diversity in their communities

Day 1 –

Today you will learn about the Earth and the important facts about the Earth.

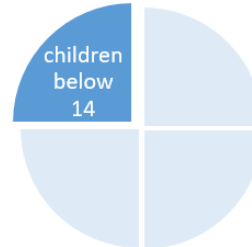
Time	Activity and Description
5 minutes	<p>Introduce to the learners that they will learning about <u>our</u> planet, Earth and about the continents, countries, and people on it.</p> <p>Explain that it is round, and looks like a ball that is stretched from the middle.</p> <div style="text-align: center;"> <p>Earth topography (ETOPO2_010arcmin)</p> </div> <p><i>Source:</i> https://www.asu-cas.cz/~bezdek/vyzkum/rotating_3d_globe/figures/elevation_2d_map_Earth_topography_ETOPO</p>

	<p><i>2_010arcmin_GMT_globe_px0650.png</i></p>
<p>25 minutes</p>	<p>The World in Numbers</p> <p>Learners answer the questions in the World in numbers worksheet (Appendix 1). (It is preferred to have a hard copy of the worksheet).</p> <p>If needed, explain to them what continents and oceans are:</p> <ol style="list-style-type: none"> 1. Continents: Large continuous area of land on the earth's surface 2. Oceans: Large bodies of salty water on the earth's surface <p>Answers:</p> <p>There are 195 countries in the world, and a total of 8 billion people. 1 in every 4 persons living on Earth is a child under the age of 14. That means there are about 2,000,000,000 or 2 billion children living on earth.</p>
<p>10 minutes</p>	<ul style="list-style-type: none"> ● Can you imagine how mathematicians or demographers (people who study human population numbers) deal with such large numbers like 2 billion? ● To make it easier for us to deal with huge numbers like populations, mathematicians developed the idea of percentage. ● Percentage is when you divide something into 100 equal parts, and then express any quantity as a number out of hundred. ● Example 1: In the picture below, there is a really huge number of candies. One cannot tell how many green candies there are. However, if we take 100 candies and arrange them as in the below picture, we will get 25 Yellow candies, 25 Green, 25 Orange and 25 Red. So, we say that 25 Percent of the candies are yellow. We write this as: 25% Yellow.



- In the same manner, if the world had 100 people: 25 would be children between 0 and 14 years of age 66 would be between 15 and 64 years of age 9 would be 65 years of age and older
- When we say that 25% of the world population are children under the age of 14. It means in every group of 100 people, 25 of them are children. Which is one quarter of the whole population.
- If the circle below was 100, each one of the four quarters we get when we divide it into 4 equal parts will be 25. Divide 100 by 4 to verify:

$$\begin{array}{r}
 25 \\
 4 \overline{)100} \\
 \underline{-8} \downarrow \\
 20 \\
 \underline{-20} \\
 0
 \end{array}$$

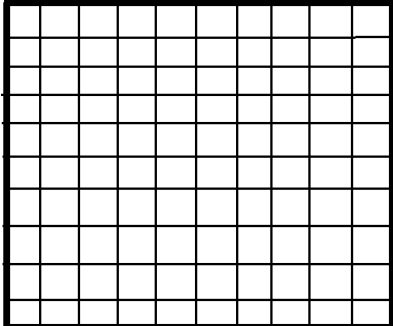


<p>15 minutes</p>	<p>Answer the following questions:</p> <ol style="list-style-type: none"> 1. If the world had 100 people, 66 would be between 15 and 64 years of age. What percentage of the world population are between 15 and 64 years? 2. If the world had 100 people, 9 would be 65 years and older. What percentage of the world population is <u>not</u> 65 years and older? <p>Answers:</p> <ol style="list-style-type: none"> 1. People between 15 and 64 years: 66% 2. People 65 years and older: 9%
<p>30 minutes</p>	<p>Challenge (can be done in groups):</p> <ul style="list-style-type: none"> • Using any suitable material, create a durable 3-D model of the world. Try to create a round figure or simply draw a figure of the Earth on a large piece of paper. • The names of continents and oceans written clearly on it. <p>Hint: some easy ways that you can use to construct the globe is using paper bowls, layering on used paper and then drawing on the outer layer or wrapping a football or any other ball with paper</p> <ul style="list-style-type: none"> • Present your model/map to the class.

	<ul style="list-style-type: none"> ● Share feedback regarding the following: <ul style="list-style-type: none"> ○ What did you like about their model? ○ What could have been better in their model?
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Day 2

Today, you will learn about Earth's population and how we are all interconnected.

Time	Activity and Description
20 minutes	<p>Recap percentages and then challenge learners to do the following activity.</p> <p>The learner will use the diagram below, to create a world model showing world population distribution by age using the information below</p> <ul style="list-style-type: none"> ● Children between 0 and 14 years: 25% ● People between 15 and 64 years: 66% ● People 65 years and above: 9% <div style="display: flex; align-items: center;"> <div style="flex: 1;">  </div> <div style="flex: 1;"> <ul style="list-style-type: none"> Children between 0 and 14 years People between 15 and 64 years People 65 years and above <p style="margin-left: 20px;">World model</p> </div> </div> <p>Hint: The diagram has 100 squares</p> <p>Answer: the learner will color 25 boxes green, 66 boxes pink and 9 boxes grey.</p>
20 minutes	<p>Activity:</p> <p>As we know, mathematicians divided all the 8 billion people in the world into groups of 100. To represent the percentages of people living on each continent, they made this population distribution drawing (see appendix) of the world map with 100 human characters.</p> <p>Use the population distribution visual in the appendix to count what percentage of people live on each continent.</p> <ul style="list-style-type: none"> - North America - South America - Africa

	<p>- <i>Europe</i></p> <p>- <i>Asia</i></p> <p>- <i>Australia</i></p> <p>Hint: There are a total of 100 people in the Population distribution visual</p> <p>Answers: North America 5% South America 9% Africa 16% Europe 10% Asia 60% Australia (less than 1%)</p> <p>Questions:</p> <ul style="list-style-type: none"> • Which continent has the most people living in it? • Which continent seems to be least populated? <p>Optional: for Parents/educators to explain: You know that there are around 25 Million people living in Australia. However, this number is less than 1% of the total population of the world and that's why the visual showed nothing on Australia. Actually, because there are 8 billion people on the planet, 1% of the whole population is a huge</p>
<p>15 minutes</p>	<p>Now that we know how big our planet is, and how many people live on it at the moment, let's try to see how interconnected our lives are. How 'global' is our family?</p> <p>Activity: The learner together with classmates/the educator will answer a set of questions to realize our global interconnectedness. (Choose only the relevant questions). In each case, ask the learner to draw a line from the country/continent the family lives in to the identified country/continent.</p> <ul style="list-style-type: none"> • Do we have family members living in other countries/ continents? Can you spot that continent on the world map? • Do we have friends from other countries or continents? Can you spot that continent on the world map? • Do any of us use or know a salutation/greeting in another language? Where did that language originate? • Do any of us like a dish from a different culture/country? • Have any of us travelled to another country?

<p>15 minutes</p>	<p>Educator/parent supported research: The educator/parent search for answers to the following questions and explain to the learners about the origin of these goods by locating the countries on the Earth model they made on the previous day. Answers can be found either by reading labels on the products, asking the salesperson at the market where we buy them, asking relatives and friends, or from newspapers. Where do we get the necessities of our life (whether locally produced or imported from other countries)? Choose any four of the below categories, and mark on the map the location they are imported from.</p> <ul style="list-style-type: none"> ● Rice, wheat for bread, lentils ● Fruits and vegetables ● The fuel that operates our electricity power plants and transportation vehicles ● The manufacturing material and process of our phones or computers ● The cotton in our clothes ● The vehicles we drive ● Where are our electric appliances made? ● Why is it that our country exports to other parts of the world?
<p>10 minutes</p>	<p>Learners reflect on and discuss the following question:</p> <ul style="list-style-type: none"> ● What do you think of all the things we have at home: how many people do you think worked on them until they reached our house? (starting from extraction of raw material, to manufacturing, to transport.) <p>(Raw materials are the things that are found in nature that are then processed and used to create the things we use in our daily lives. For example cotton is the raw material used in making t-shirts).</p>

Day 3 –

Today you will learn about diversity and tolerance.

Time	Activity and Description
<p>15 minutes</p>	<p>Introduction to Diversity: Take 2 minutes to draw a picture of yourself with a few details like your hair and eye colour, and your clothes. Now, draw what your friend or classmate looks like. (<i>learners can use photographs instead of drawings if being done in a home setting</i>)</p>



Learners reflect and discuss these questions:

1. Do both of you look the same?
2. What similarities do you see?
3. What are some differences?

- Of course, you do not look exactly the same. You both have eyes, a nose, and a mouth. But your hair, eye colour, height, skin tone, or face shape may be different
- These differences that we see among people or things are known as diversity.
- In addition to the way our bodies look, we can be different or diverse in many ways.
- Can you list 3 other ways in which people can be diverse or different?

(Diversity among people can be seen in the clothes they wear, their age, the religion they follow, the food they eat, the places they are from and so many other things.)

15 minutes

Understanding diversity:

We all have different traits. We are born with some traits while some other traits are based on our choices and on other people's choices too.

Let each of us fill this ID table, and then discuss it. Write down things about yourself in the two columns.

The educator can help learners who cannot read/write all questions and answers yet.

Things I did not choose	Things I chose for myself
Name	My favorite dish
Nationality	My super hero
Religion	Favorite story
Eye-color	Favorite game

20 minutes

Learners have a discussion around the identity card, and the idea of perceiving differences and building barriers between peoples based on things they have not chosen.

- What is similar for all of us?
- What are our differences?

	<ul style="list-style-type: none"> Do you think there are other learners from around the world who share similarities with you? Would you prefer playing your favorite game with your parents or with a learner from another country? Why?
15 minutes	<p>Reflection questions:</p> <ul style="list-style-type: none"> What do you think when you see a kid who has a different skin color? What do you feel when you are with people who speak a language you don't understand? Would you like to live in a country where people have a different skin color, speak a different language and eat different food from yours? Do you think they may share similarities with you? If so, what similarities might you share? If you have a friend from a different religion or country, what gift would you give them?

Day 4 –

Today we will find out how diverse our community is and make a collage to represent this diversity.

Time	Activity and Description
45 minutes	<p>Appreciating diversity: Over the next two days, learners will interact with people and observe various aspects of their community to begin creating a collage of their diverse surroundings. Learners take a walk around their community and make a note of the diversity they see:</p> <ol style="list-style-type: none"> Amongst people around (age, gender, clothing, height, skin colour, etc.) In the types of food available around The variety of products available in the market In the plants and animals around <p>They can also include any other type of diversity they see in their community. After this, have them reflect on the kinds of differences they saw. Learners then draw what they saw or find representative images from newspapers/magazines, they can even click photos, print and stick them on a chart paper.</p>
15 minutes	<p>Learners discuss: <i>How would you feel if you only saw the same kind of people, food, and plants around you? With no diversity at all.</i></p> <ul style="list-style-type: none"> Diversity adds variety to life that makes it exciting and fun. In addition to that, different people come with their own set of ideas and skills. For example, in a group project, each member has a different skill that they can use. Diversity also helps us think openly and accept different ideas.

Day 5-

Today we will complete our collages and present them to the class.

Time	Activity and Description
20 minutes	Learners take this time to complete their collage. They can add details, captions and decorate their collage as they like.
30 minutes	Learners present their collage to their classmates and share answers to the following: <ol style="list-style-type: none"> 1. What differences did they enjoy adding to their collage? 2. Did they learn anything new about their community? 3. How does their community benefit from the diversity around. Learners share feedback on the presentations based on the following: <ol style="list-style-type: none"> 1. What did you like about the presentation? 2. What could have been better? 3. What was one similarity and one difference between your presentation and the one you just saw?
15 minutes	Reflection: <ol style="list-style-type: none"> 1. What did you enjoy in this project? 2. What did you not enjoy? Why? 3. What was the most interesting thing that you learned? If there is so much diversity in just our community, can you imagine how much diversity they must be around the entire planet?

Additional enrichment activities:	Learners can write a letter to someone from another country to understand their culture and lifestyle and share details about their own.
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APPENDIX

WORLD IN NUMBERS WORKSHEET

The earth is like a ball.

On its surface there are land pieces and water surfaces. Large pieces of land are called continents, and large water surfaces are called oceans.



Source: <http://www.myschoolhouse.com/courses/O/1/76.asp>

1. How many continents are there in the world? Please name them.
2. How many oceans? Please name them.
3. In which continent do you live?
4. If you want to travel to North America, what oceans and continents do you have to cross?

Harder questions:

1. How many countries are there in the world? (make a guess)
2. How many people are there living around the whole world? (make a guess)
3. What proportion of the worlds' population are children (under age 14)?

WORLD POPULATION DISTRIBUTION

What percentage of people live in each continent?



Source: Knowva Academy <https://www.youtube.com/channel/UCwkpua146XUopl9tNGli4fw>

An alternative: “If the world was 100 people” video

<https://youtu.be/A3nIIBT9ACg>



Learners may also access the video linked below for a visual representation of “the world in numbers” if they have internet access:

Source: <https://www.youtube.com/watch?v=LXqOd5noN8g>