



W N D E R D A L

EDUTAINMENT CENTRE

Intermediate Phase

Teachers' On-Site Pack

WELCOME

Welcome to Wonderdal, a world of wonder and discovery, home of Kora, the Tree of Light, and the magical Amuki.

For the next two hours each of your learners will have their very own virtual learning companion. Together they will grow strange plants, collect energy crystals bearing ancient glyphs, play energy games, climb Kora's branches, relax in the story cave and more. During this time, please stay with your group and experience wonderful Wonderdal with them.



ITINERARY

Arrival and check-in (15-20 minutes per class)

Edutainment experience (90-120 minutes)

Free-play: Learners explore and engage with educational activities in the venue.

Classroom experience (30-45 minutes)

Natural Sciences and Technology and/or Life Skills Lesson facilitated by teacher. Lesson plans provided in this pack.

Four theme options: Plants, Nutrition, Energy or Sun Energy and Food Chain (combining Plants and Energy).

Lunch break (20-30 minutes)

There are seating areas available where groups can enjoy lunch. Lunch is not provided — learners must bring their own.

WE NEED YOUR HELP

Wonderdal is a rich world of imagination, learning and play. We need your help to extend this creative learning experience into your learners' real world and your classroom.

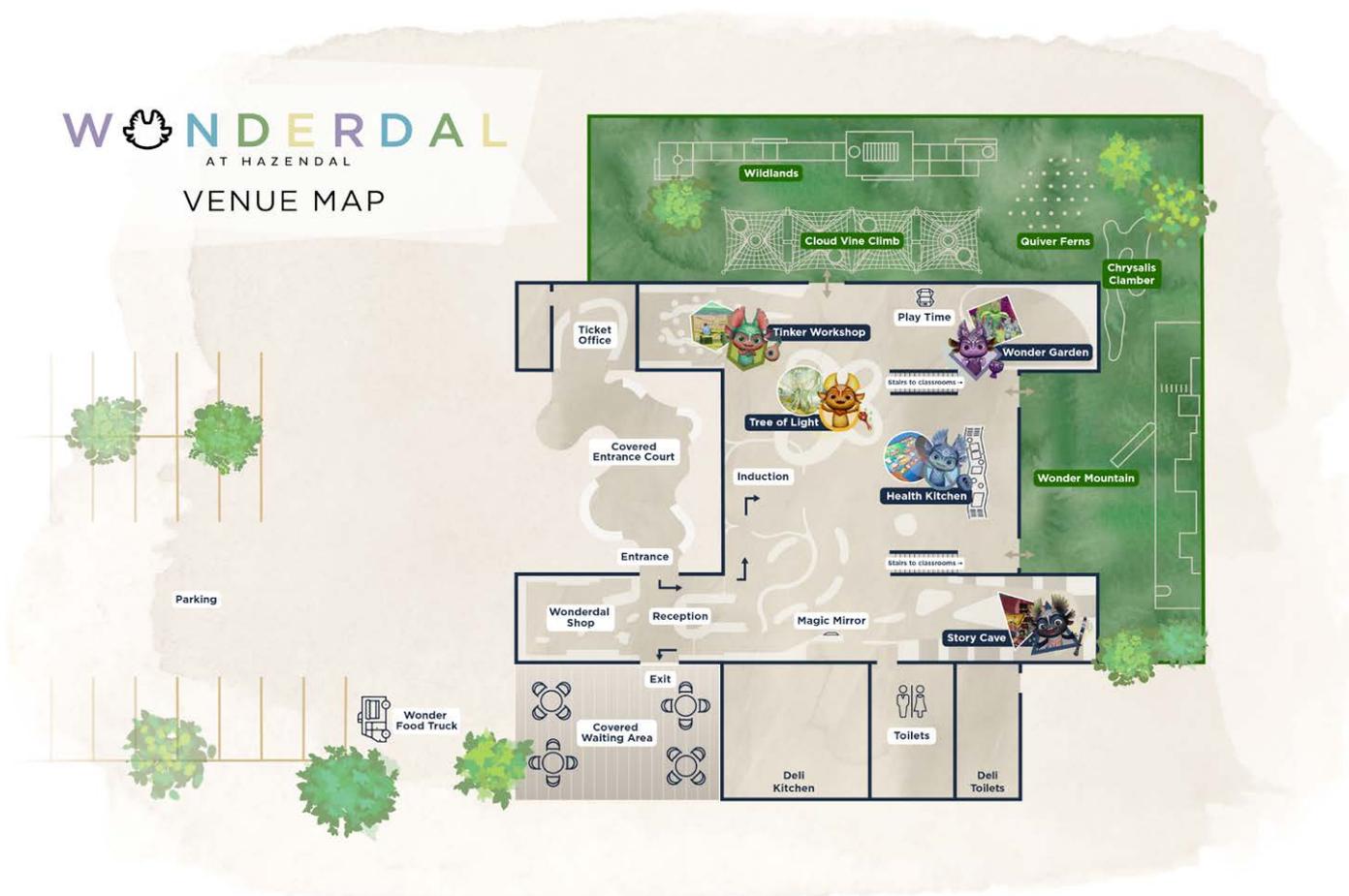
In this pack you will find what you need to align learnings in Wonderdal to the Intermediate Phase Curriculum. We also offer the use of an on-site classroom with four lesson options on topics covered in Intermediate Phase Natural Science and Technology and Life Skills. You can choose between the Energy, Plants, Healthy Eating and Energy Chain themes.

CHOOSE YOUR CLASSROOM ADVENTURE

For optimal learning select a classroom theme before you enter Wonderdal and ensure all learners in your group engage with the Wonderdal activity aligned to that theme.



MAP OF VENUE



LEARNING ZONES



Tinker Workshop

A workshop sheltered by Tinker Trees where learners can experiment with different kinds of energy and engage in tinkering activities. The Wind Tunnel gives learners the opportunity to play engineer and explore the aerodynamics of their own designs.

Educational theme: Wind, kinetic/motion and electric energy.

Tree of Light

Kora, the Tree of Light, grows in the middle of Wonderdal. Here learners can generate motion energy by playing a physical hand-cycling game. They can also climb through the trunk of Kora to play on her branches.

Educational theme: Kinetic/motion energy.



Wonder Garden

In the Wonder Garden learners will encounter a fully immersive digital landscape that provides a fantastical experience of how plants grow. Learners can play gardener and grow different imaginary plant types. They can choose which one to nurture and grow it from a seed or sapling to a fully fruited plant in a matter of minutes.

Educational theme: What plants need to grow.

Health Kitchen

In the virtual Health Kitchen learners will have the opportunity to cook a meal for their Amuki friend, using basic processing methods like chopping, frying and blending. The Amuki provide feedback and teach their human friends how to create a balanced meal. In the Health Kitchen the Amuki demonstrate that healthy food is an important source of energy for a healthy body.

Educational theme: Healthy Eating.





Story Cave

In this zone, children can have a break from the buzzing activity of Wonderdal. They can listen to educational audio stories on the adventures of the Amuki in special nooks or spend some time in solitude reading from the many books in the Wonderdal library. **Audio stories with quizzes good for develop listening skills.**

Wildlands

At the edge of Kora's realm, beyond Wonderdal, lies an area that is wild and untamed. Here children can stretch their legs and engage in various thrilling physical activities.

Innovative outdoor play area that stimulates gross motor skills development.



CLASSROOM RESOURCES

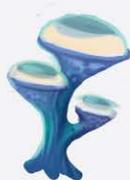
- ▶ Projector, pencils, sheets to work on and posters available in the classroom.
- ▶ Please take learners' completed worksheets to add to their portfolios or to send home with them.

WONDERDAL CLASSROOM ACTIVITY OPTION 1

PLANTS



Breadfruit



Dairydew



Salad Lily



Amino Berry Bush



Fatberry Bush

Classroom time: 30-45 minutes

Link to Wonderdal Learning Experience: Wonder Garden

Important: Make sure that all learners engage with activities in the Wonder Garden during their first two hours of free play.

Materials: Each learner should have a worksheet and crayons or pencils (provided on-site).

Key learnings: Plants need water, soil, air and sunlight to grow. Plants have roots, stems, leaves and flowers/seeds/fruit.

Natural Sciences and Technology	
Grade 4	Term 1 Topic: Structure of plants, what plants need to grow
Grade 5	Term 1 Topic: Plants rely on resources (sun, water, air, soil)
Grade 6	Term 1 Topic: Photosynthesis

1 CLASSROOM SET-UP

Groups: Divide learners into groups of four.

2 TALK ABOUT THE PLANTS IN WONDERDAL (5 MINUTES)

Activity description: Class conversation about Wonderdal with specific focus on the plants in the Wonder Garden. Learners sit in their groups. Use the suggested questions and instructions or your own.

Suggested questions and prompts:

- ▶ What was the most interesting thing you saw in Wonderdal?
Give three learners a chance to answer.

If a learner brings up the Wonder Garden use the lead to start the conversation on plants, alternatively ask about the Wonder Garden.

- ▶ Have you seen the plants from Wonderdal before?
- ▶ Do we have the same plants in our world?
- ▶ In your groups, see if you can remember all five different plants that grow in Wonderdal. What do they look like and what do you imagine the plants taste like?

Give groups a couple of minutes and ask feedback. Go around and let different groups describe a plant until all five have been covered. Then move the conversation to real world plants.

- ▶ How are the plants in the Wonder Garden the same as plants in our world?
Answers: Their structure: roots, stems, leaves, flowers/fruits/seeds
How they grow from seed, and have similar life cycles.
What they need to grow: soil, sun, water, air.

3 CONNECT WONDERDAL PLANTS TO THE REAL WORLD (15 MINUTES)

Activity description: Group brainstorm about the functions of the different parts of a plant.

Suggested instructions and prompts:

- ▶ We just spoke about the parts of a plant.
- ▶ Remember the parts are: the roots, the stem, the leaves, the flower, the fruit and the seed.
- ▶ Each group will take one part and think about it a little and then tell us what the job of that part of the plant is.

Assign a part to each group:

- ▶ Roots
- ▶ Stems
- ▶ Leaves
- ▶ Flowers
- ▶ Fruit
- ▶ Seeds

If there are more parts than groups, the teacher and chaperones can also take part. Don't give the groups too much time but move through them quickly and prompt the groups who are stuck with the more difficult parts for their age level, i.e. flowers attract bees, fruit store energy, seeds help the plant reproduce, etc.

Move between the groups and prompt them if they are stuck. Get one member of each group to stand up and give feedback.

Answers:

Roots: Keep the plant in the soil, absorbs water and nutrients

Stem: Carries water from the roots to the leaves

Leaves: Absorb light and air and makes food for the plant

Flowers: Attract bees

Seeds: Help the plant reproduce

Fruit: Hold and spread the seeds

4 INTRODUCTION AND FACILITATE DRAWING ACTIVITY (15 MINUTES)

Activity description: Learners each draw a plant they nurtured in the Wonder Garden. They also need to add the three elements that plants need to grow.

Materials: Hand out the provided worksheets and crayons or pencils.

Use the suggested instructions and prompts or your own. Learners can remain seated in their groups for this although they do this activity individually.

Suggested instructions and prompts:

- ▶ Now, each on your own, make a quick drawing of one plant that you helped grow in the Wonder Garden.
- ▶ First draw the plant with all the parts that you can remember.
- ▶ Remember there are roots at the bottom and then what follows?

Let learners remember the rest on their own if possible.

- ▶ Now you still need to add all the things that the plant needs to grow.
- ▶ Remember it is planted in soil ... and then what else?
- ▶ See if you can remember and add all the things your plant needed to grow to your drawing.

5 KEY LEARNING REMINDER (3 MINUTES)

Recap the parts of the plant and what a plant needs to grow.

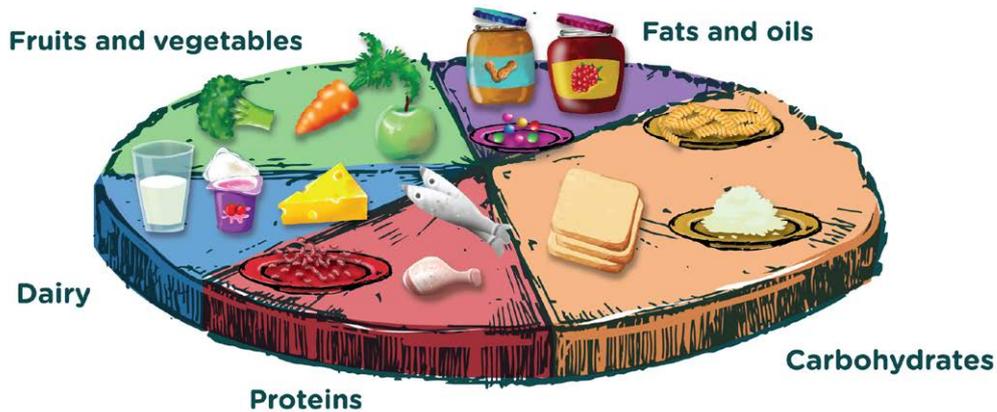
6 EXTENSION

You can also extend the learning further after your visit with a related classroom activity.



WONDERDAL CLASSROOM ACTIVITY OPTION 2

NUTRITION



Classroom time: 30-45 minutes

Link to Wonderdal Learning Experience: Health Kitchen

Important: Make sure that all learners engage with the Balanced Meal Game during their first two hours of free play.

Materials: Each learner should have a worksheet and a crayon or pencil (provided on-site).

Key learnings: The different food groups and that we need to eat balanced meals for health.

Life Skills & Natural Sciences and Technology

Grade 4	Term 4 Topic: Dietary habits of children (Life Skills)
Grade 5	Term 3 Topic: Healthy eating for children (Life Skills)
Grade 6	Term 1 Topic: Nutrients in food > Food groups (Natural Sciences and Technology)

1 CLASSROOM SET-UP

Groups: Divide learners into groups of four.

Conversation starter with the whole group while they are sitting in their groups:
What was the most interesting thing you saw in Wonderdal?

Give three learners a chance to answer.

If a learner brings up the Health Kitchen, use the lead to start the conversation on meals and eating.

2 TALK ABOUT WHAT THE AMUKI EAT IN WONDERDAL (12 MINUTES)

Activity description: In their groups, children tell each other what ingredients they used in the meal they made for their Amuki. Learners sit in their groups. Use the suggested instructions and prompts or your own.

Suggested instructions and prompts:

- ▶ Who made a meal for their Amuki?
- ▶ In your groups each take a turn to tell the others what you put in the meal that you made for your Amuki?

After 5 minutes, lead a conversation in the big group about the different food groups:

- ▶ Raise your hand if your Amuki liked the meal that you made?
- ▶ Did anyone's Amuki not like the meal that they made?
- ▶ Could you figure out what the Amuki liked and what they didn't like?

Answers: They wanted different things on the plate, they wanted more of some things and less of other things, they didn't like too much sugar or too much salt.

- ▶ How many different things did your Amuki want to eat?

Answer: Five

- ▶ What types of food did your Amuki want more of?

Answers: Carbohydrates, fruit and vegetables (Learners may mention specific foods in these categories if they don't know the food types yet.)

- ▶ And what types of food did your Amuki want just a little bit of?

Answers: Fats and sugar (could also mention protein and dairy)

3 CONNECT TO WHAT WE EAT IN THE REAL WORLD (15 MINUTES)

Activity description: Quick group brainstorm about where learners list foods belonging to the five food groups used in the game and prompted in the previous activity.

Suggested instructions and prompts:

- ▶ We just spoke about how your Amuki friend likes to eat a plate of food with five different types of food on it: Protein (i.e. chicken), carbohydrates (i.e. rice), fruit and vegetables (like apples and carrots), dairy (i.e. yogurt), and fats and sugar (i.e. peanut butter or jam).
- ▶ Each group will take one type of food and give us three examples of that type of food.
- ▶ Try to think of other examples than what you saw in the Health Kitchen or the ones I just gave you.

Assign a food group to each group:

- ▶ Protein
- ▶ Carbohydrates
- ▶ Fruit and vegetables
- ▶ Dairy
- ▶ Fats and sugar

Move between the groups and prompt them if they are stuck. Get one member of each group to stand up and give feedback

An extension for Grade 6 is to also ask the groups about the nutritional value of that food group.

4 DRAW A BALANCED MEAL FOR DINNER (15 MINUTES)

Activity description: Learners make a quick drawing of a healthy meal that they would like to eat for dinner.

Materials: Hand out provided crayons or pencils and paper.

Learners remain seated in their groups although they do this activity individually.

Suggested instructions and prompts:

- ▶ Now, each on your own, let's draw a healthy meal that you want to have for dinner tonight.
- ▶ Remember you must have of each of those five food groups on your plate.
- ▶ First draw the plate as big as you can fit on the page.
- ▶ Then you need to draw your favourite type of protein. (Mention some of the proteins that came up in the previous activity.)
- ▶ Next you need to add your favourite carbohydrate. (Mention some of the carbohydrates that came up in the previous activity.)
- ▶ Now add fruits and vegetables that you like to eat.
- ▶ And a bit of dairy.
- ▶ And finally remember we can only have a bit of sugar and fats. What are you going to pick for this treat for your meal?

Ask a couple of learners to show their drawing and share what they added to their balanced meal.

5 KEY LEARNING REMINDER (3 MINUTES)

Recap the five food groups and that we need a balance of all of them.

6 EXTENSION

You can also extend the learning further after your visit with a related classroom activity.



WONDERDAL CLASSROOM ACTIVITY OPTION 3

ENERGY

Classroom time: 30-45 minutes

Link to Wonderdal Learning Experience: Tinker Workshop, Energy Game at the Tree of Light, Wonder Garden, Health Kitchen.

Important: Make sure that all learners engage with activities in all the zones linking to the lesson theme during their first two hours of free play.

Materials: Each learner should have a worksheet and a crayon or pencil (provided on-site).

Key learnings: Energy is all around us. Types of energy (wind, motion, electric, sun, stored energy in food) and energy transfer.

Natural Sciences and Technology

Grade 4	Term 3 Topic: Energy around us > Input and output energy
Grade 5	Term 3 Topic: Energy and movement
Grade 6	Term 1 Topic: Photosynthesis Term 3 Topic: Electrical Circuits

1 CLASSROOM SET-UP

Groups: Divide learners into groups of four.

Activity description: Conversation starter with the whole group while they are sitting in their groups.

Suggested questions and prompts:

- ▶ What was the most interesting thing you saw Wonderdal?
Give three learners a chance to answer in the big group
- ▶ Did you notice that everything in Wonderdal is connected to energy?
- ▶ What is energy?"

Answers:

Energy can make something happen.

It is how things change and move.

It has different forms.

It takes energy to cook food, for a car to move and for us to jump in the air.

- ▶ Give me one example of a type of energy.
- ▶ Now I want us to think about the types of energy in Wonderdal.

2 TALK ABOUT ENERGY IN WONDERDAL (12 MINUTES)

Activity description: Group brainstorm types of energy seen in Wonderdal.

Suggested questions and prompts:

- ▶ In your groups, come up with a list of types of energy you saw in Wonderdal and where you saw it.
- ▶ Move between the groups and prompt them if they are stuck. Get feedback from the groups. One example as feedback per group.

Answers:

Wind energy (Wind Tunnel in the Tinker Workshop)

Electric energy (Circuits Game in the Tinker Workshop)

Motion energy (Marble Run Game in the Tinker Workshop)

Kinetic energy (Energy Game at The Tree of Light)

Sun energy (Wonder Garden)

Food energy (Wonder Garden and the Health Kitchen)

3 CONNECT ENERGY TYPES TO THE REAL WORLD (15 MINUTES)

Activity description: Groups connect one example of energy to the real world.

Assign each group one of the energy types and ask them to come up with examples of that energy visible in the real world.

Suggested instructions and prompts:

- ▶ I'm going to give each group a specific energy type from the ones that we just talked about.
- ▶ You need to come up with three examples of where we use or can see that type of energy in our world (not in Wonderdal, but in our world).

Energy types to assign to groups: Wind, electric, motion, sun and food

Ask a member of each group to stand up and give feedback.

4 DRAW AN EXAMPLE OF ENERGY TRANSFER (15 MINUTES)

Activity description: Learners make a quick drawing illustrating energy transfer by themselves. They can remain seated in their groups for this although they do this individually.

Materials: Hand out crayons or pencils and worksheets (provided on-site).

Suggested instructions and prompts:

- ▶ We know that energy can transfer from one kind of energy into another kind of energy. (Provide an example relevant to your class.)
- ▶ Each on your own....
- ▶ Use your pencil and the paper provided...
- ▶ Make a quick drawing of an example of:
Grade 4: A musical instrument that transfers motion energy into sound.
Grade 5: Motion energy that transfers into another type of energy.
Grade 6: Sun energy that transfers into another type of energy.

Move between the learners and prompt them if they are stuck. Get feedback from a couple of learners.

5 KEY LEARNING REMINDER (3 MINUTES)

Recap the types of energy from the lesson and repeat some examples of energy transfer mentioned by the groups.

6 EXTENSION

You can also extend the learning further after your visit with a related classroom activity.



WONDERDAL CLASSROOM ACTIVITY OPTION 4

THE ENERGY CHAIN AND THE FOOD CHAIN

Classroom time: 30-45 minutes

Link to Wonderdal Learning Experience: Wonder Garden, Health Kitchen

Important: Make sure that all learners engage with activities in all the zones linking to the lesson theme during their first two hours of free play.

Materials: Each learner should have worksheet and a crayon or pencil (provided on-site).

Key learnings: Energy transfer in the energy chain and food chain.

Natural Sciences and Technology	
Grade 4	Term 3 Topic: Energy for life > Energy from food, energy in our food comes from the sun, energy chain/food chain
Grade 5	Term 1 Topic: Food and feeding > Food chain: starts with a plant (produces food) – animal eats the plant – transfer of energy
Grade 6	Term 1 Topic: Food webs

1 CLASSROOM SET-UP

Groups: Divide learners into groups of four.

Conversation starter with the whole group while they are sitting in their groups:

- ▶ What was the most interesting thing you saw Wonderdal?
- ▶ Give three learners a chance to answer.
- ▶ Did you notice that everything in Wonderdal is connected to energy?
- ▶ What is energy?

Answers:

Energy can make something happen.

It is how things change and move.

It has different forms.

It takes energy to cook food, for a car to move and for us to jump in the air.

- ▶ Give me one example of a type of energy.

2 TALK ABOUT ENERGY IN WONDERDAL (12 MINUTES)

Activity description: Quick group brainstorm about the types of energy they witnessed in Wonderdal.

Suggested instructions and prompts:

- ▶ Working together in your groups, I'm going to give you a couple of minutes to think of all the types of energy that you saw in Wonderdal and where you saw it.

Move between the groups and prompt them if they are stuck. Get feedback from the groups. One example as feedback per group. Repeat what the groups have said before a new group answers.

Answers:

- Wind energy (Wind Tunnel in the Tinker Workshop)
- Electric energy (Circuits Game in the Tinker Workshop)
- Motion energy (Marble Run Game in the Tinker Workshop)
- Kinetic energy (Energy Game at The Tree of Light)
- Sun energy (Wonder Garden)
- Food energy (Wonder Garden and the Health Kitchen)

3 CONNECT THE ENERGY CHAIN (15 MINUTES)

Activity description: Quick group brainstorm about energy transfer:
Sun energy -> stored food energy -> motion energy -> a light that is switched on

Suggested instructions and prompts:

- ▶ Can one energy transfer into another energy? Ask for an example or give an example.
- ▶ Let's create an energy chain that starts with the sun and ends with a light being switched on. It should also have a plant and a person in the chain.
- ▶ Lead the questions for the younger learners, for Grade 6 let them solve the puzzle in their groups and get feedback from the groups.

Example of instructions for younger learners:

- ▶ How does the sun give energy to the plant?
- ▶ How does the plant give energy to the human?
- ▶ How can a human use his or her body to create light energy?
- ▶ Remind younger learners of the Energy Game in The Tree of Light if they get stuck.
- ▶ Now each of you in your group be one of the types of energy. Who is the sun? Who is the plant? Who is the human? Who is the light that is switched on?
- ▶ Tell each other how you give energy to the next one in the chain?
- ▶ Ask a group or two to repeat the chain to the class by members in the group saying:
 - I am the sun and I shine my heat on the plant to give it energy.
 - And I am the plant and I use the heat and I make a fruit.
- ▶ Alternatively ask all the suns, for instance, in the class to raise their hands and then ask one how he or she gives the plant energy and follow that along the energy chain.

4 DRAW AN EXAMPLE OF A FOOD CHAIN (15 MINUTES)

Activity description: Learners make a quick drawing illustrating their own version of a food chain. They can remain seated in their groups for this although they do this individually.

Materials: Hand out pencils and paper (provided on-site).

Suggested instructions and prompts:

- ▶ We know that energy can be transferred from one kind of energy into another kind of energy.
- ▶ For example: Sun energy turns into food energy and through eating the food we get energy and we can run around and create motion energy.
- ▶ But we humans are not the only animals who eat. Animals eat plants, but some animals eat other animals. And we sometimes eat animals too. This is a food chain.
- ▶ I want you to draw a food chain, where one plant or animal eats one plant or animal eats another to get energy and then that plant or animal gets eaten by another and so on...
- ▶ Each on your own, use the pencil and the paper provided and make a quick drawing of an example of a food chain:
Grade 4: Three levels
Grade 5: Four levels
Grade 6: Five levels

Move between learners and prompt them if they are stuck. Get feedback from a couple of learners.

Example of possible drawing:

Starting with sun and then plants and then a range of animals who eat one another and/or a human.

5 KEY LEARNING REMINDER (3 MINUTES)

Recap the energy chain and food chain..

6 EXTENSION

You can also extend the learning further after your visit with a related classroom activity.



NEED ASSISTANCE?

Wonderdal staff members will be present in all areas you visit. In case of a venue emergency or evacuation, they will provide you with clear instructions.