



W  N D E R D A L
EDUTAINMENT CENTRE

Grade 7

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.

Three theme options: Diversity of Plants, Personal Diet and Nutrition or Renewable Energy Sources.

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.

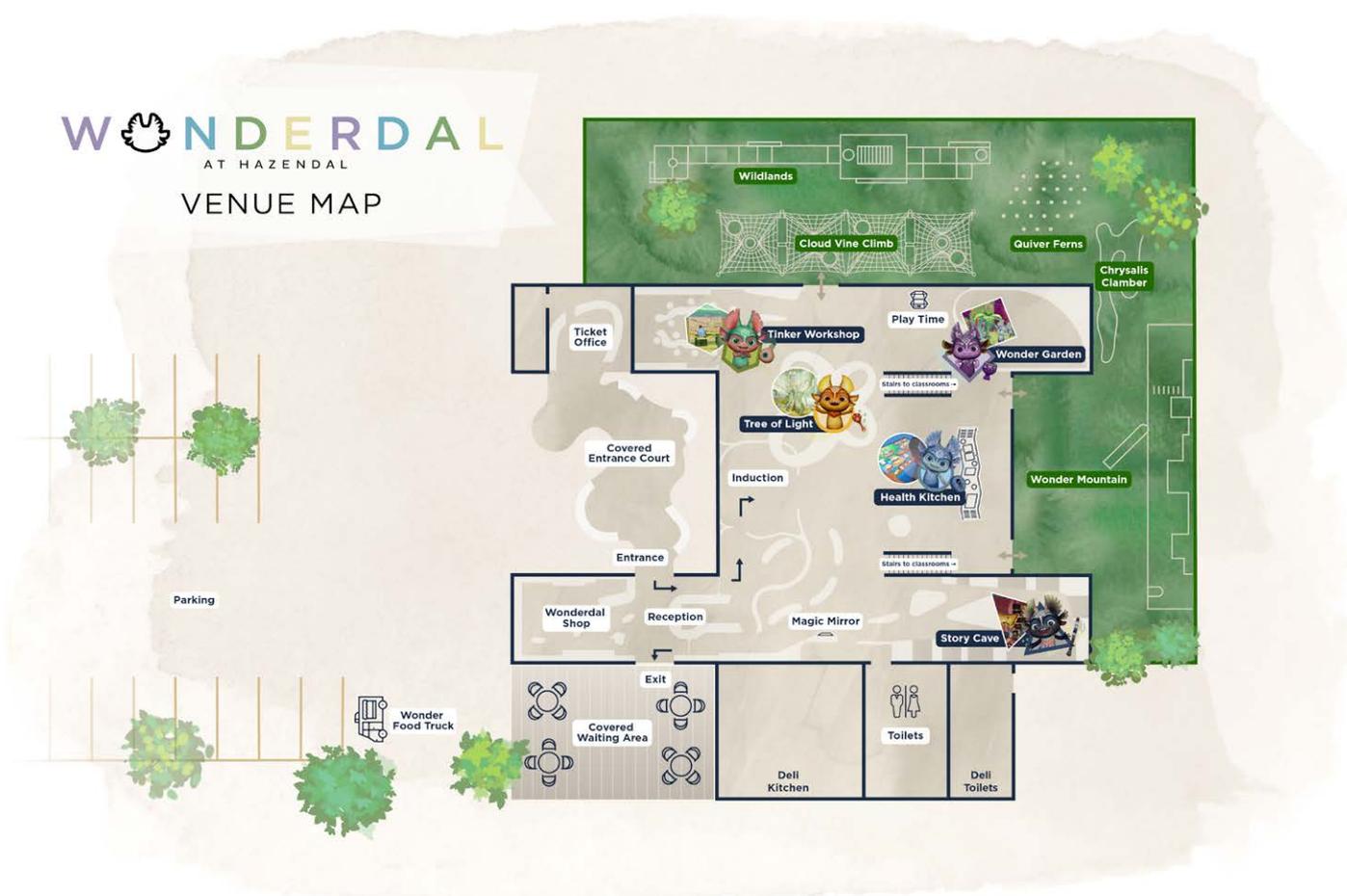
In this pack you will find what you need to align learnings in Wonderdal to the Grade 7 Curriculum. We also offer the use of an on-site classroom with three lesson options on topics covered in Grade 7 Natural Science and Technology and Life Orientation. You can choose between the Diversity of Plants, Personal Diet and Nutrition and Renewable Energy Sources 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

DIVERSITY OF PLANTS



Breadfruit



Dairydew



Salad Lily



Amino Berry Bush



Fatberry Bush

Classroom time: 30-45 minutes

Link to Wonderdal Learning Experience: : Wonder Garden, Health Kitchen

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 paper and a pencil (provided on-site).

Key learnings: Diversity of plants

Natural Sciences

Grade 7

Term 1 Topic: Biodiversity > Diversity of plants

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

2 TALK ABOUT THE PLANTS IN WONDERDAL (10 MINUTES)

Activity description: Class discussion while learners are in their groups of four.

- ▶ Have you seen plants like the ones in Wonderdal before?
- ▶ Can you remember the fruits and vegetables from the Garden?
- ▶ You also saw them in the Health Kitchen.
- ▶ There are five different plants.
- ▶ What are the names of the five plants/fruits?
Answers: Breadfruit, Vitamint, Amino berries, Dairydews, Fatberries
Learners may also start describing them.
- ▶ Ask what learners can remember about the plant/fruit.
- ▶ Can they describe the plant/fruit and its life cycle?

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

Activity description: Groups choose a Wonderdal plant/fruit and must come up with five fruits or plants in the real world that share some similarities with the Wonderdal plant/fruit they picked.

Suggested instructions and prompts:

- ▶ Choose one of the following Wonderdal plants: Breadfruit, Vitamint, Amino berries, Dairydews, Fatberries
- ▶ In your group of four, come up with at least five real world fruits and vegetable that share some similarities with the plant/fruit you chose from the Wonder Garden.

Move between the groups and prompt them if they are stuck. Get a couple of groups to share with the class. Ask groups about the similarities if they are not clear about the details of the comparison.

4 DESIGN A NEW PLANT (20 MINUTES)

Groups: In groups of two, split the group of four in half.

Activity description: Learners pick two of the Wonderdal plants and design a new plant, merging the two Wonderdal plants together.

Materials: Hand out pencils and worksheets provided.

Suggested instructions and prompts:

- ▶ Choose two Wonderdal plants and merge them together to make something new.
- ▶ Think about what this new plant would look and taste like, what it would need to grow, how it will reproduce, etc.
- ▶ Make a drawing of the new fruit to show the rest of the class.

Give a couple of groups the opportunity to share their plant with the class. After they have presented. Ask the group and the class some of the following questions if they haven't addressed them already:

- ▶ Why did you choose those the specific plants to merge?
- ▶ What does the plant look like? Draw as big as possible on the provided sheet.
- ▶ Is the new plant nonvascular or vascular? Why?
- ▶ Is the new plant seedless or a seed plant? Where are the seeds and how does the plant reproduce?
- ▶ Is the new plant a gymnosperm or an angiosperm?
- ▶ Is the new plant a monocot or a dicot?

5 KEY LEARNING REMINDER (3 MINUTES)

Recap the elements that make plants different.

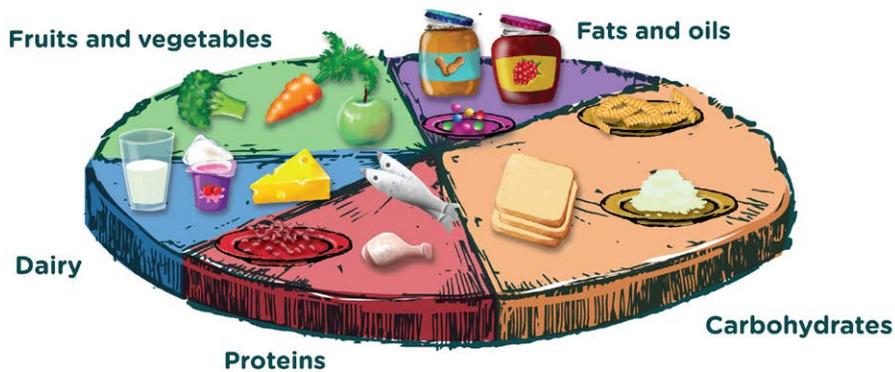
6 EXTENSION

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



WONDERDAL CLASSROOM ACTIVITY OPTION 2

PERSONAL DIET AND 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 their first two hours of free play.

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

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

Natural Sciences

Grade 7

Term 4 Topic: Personal diet and nutrition > A plan for healthy eating habits

1 CLASSROOM SET-UP

Conversation starter with class.

- ▶ Who made a meal for their Amuki?
Who got the balance in the Balanced Meal Game correct, or close to correct?
- ▶ According to the Balanced Meal Game, of which food type should we eat the most?
- ▶ The second most? The third most? And the least?

Answer:

1. Carbohydrates
2. Fruits and vegetables
3. Protein
4. Dairy
5. Fats and sugar

2 TALK ABOUT THE BALANCED PLATE (12 MINUTES)

Activity description: In pairs learners share what they had for dinner the previous evening and evaluate whether it was a balanced plate of food.

Suggested instructions and prompts:

- ▶ Do you think you had a balanced meal last night?
- ▶ In pairs tell each other what you had for dinner yesterday.
- ▶ Listen carefully to what the other person is saying.
- ▶ Is there a food group they missed out on for that meal?

Ask feedback from a couple of pairs.

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

Activity description: The class play a game where each learner must name a food in a food group following on the previous learner. This goes on until a learner can't come up with an answer or repeats a food already mentioned. Then the class start with the next food group and the learner who couldn't come up with a suitable answer gets the opportunity to answer. For example, if the food group is dairy, the first learner says milk, the second says yogurt, etc.

Suggested instructions and prompts:

- ▶ Let's play a game to see how many foods we know in a food group.
- ▶ I'm going to start with a food group and one after the other you need to name a food in that food group.
- ▶ You can't repeat something someone already mentioned.
- ▶ If you can't come up with a food, I need to count to five and we start with another food group. The person who missed the last answer, can offer the first answer in the new food group.
- ▶ For example, if the food group is dairy, the first learner says milk, the second says yogurt, etc.

4 BALANCED MEAL DESIGNER SANDWICH (15 MINUTES)

Activity description: Learners design a sandwich that incorporates all five required food groups. Learners also need to focus on getting the right balance of the different food groups in the sandwich. This is an individual drawing activity.

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

Suggested instructions and prompts:

- ▶ Draw a sandwich that is a completely balanced meal.
- ▶ This means you must fit all five food types onto the sandwich in a balanced amount.
- ▶ Remember the bread also counts, but you can also be creative with what you use as bread.

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

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

RENEWABLE ENERGY SOURCES

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 pencil (provided on-site).

Key learnings: Types of renewable energy sources.

Natural Sciences

Grade 7

Natural Sciences

Knowledge Strand: Energy and Change

Term 3 Topic: Sources of Renewable Energy > Wind

Term 3 Topic: Potential and Kinetic Energy

Technology

Knowledge Strand: Electrical systems and control

Term 3 Topic: Simple Electric Circuits

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 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.

2 TALK ABOUT ENERGY IN WONDERDAL (10 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)

FIND RENEWABLE ENERGY SOURCES IN WONDERDAL (10 MINUTES)

Activity description: Groups list all potential renewable energy sources in Wonderdal.

Suggested instructions and prompts:

- ▶ We spoke about what energy is and we thought about the types of energy in Wonderdal.
- ▶ What is renewable energy?

Answers: Energy from a source that does not run out. Energy like wind and sun.

- ▶ Can you think of examples of non-renewable energy?

Answers: Coal, gas, petrol.

- ▶ In your groups make a list of all the types of renewable energy sources in Wonderdal.
- ▶ Think of the sources you have seen used, but there are also other sources that are not being used yet.

Move between the groups and prompt them if they get stuck. Get feedback from the groups.

Answers: Solar, wind, energy from plants or leftover food, hydroelectric energy (water), motion energy.

DESIGN A RENEWABLE ENERGY MACHINE (20 MINUTES)

Activity description: Learners design a machine that uses a Wonderdal renewable energy source to power the Tree of Light. The Tree of Light is currently powered through using the hand crank. Learners need to create an alternative. They will have lots of options to consider as they brainstormed sources in the previous activity.

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

Suggested instructions and prompts:

- ▶ What kind of energy powers the Tree of Light?

Answer: motion energy or kinetic energy

- ▶ Is that a renewable energy source?
- ▶ How does it work?
- ▶ Let's think about the mechanics behind the hand-crank and how energy is stored. For this activity, think about another renewable energy source, not motion energy, that you could use to power the Tree of Light. (We just mentioned a couple of options in the previous activity.)
- ▶ Choose a renewable energy source you want to use.
- ▶ Design a machine that can power the Tree of Light using your selected renewable energy source.

Move between the learners and prompt them if they are stuck. Try to get them to consider some of the mechanical elements of their machine. Get feedback from learners on the machine they designed.

5 KEY LEARNING REMINDER (3 MINUTES)

Recap the types of renewable energy sources from the lesson.

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.