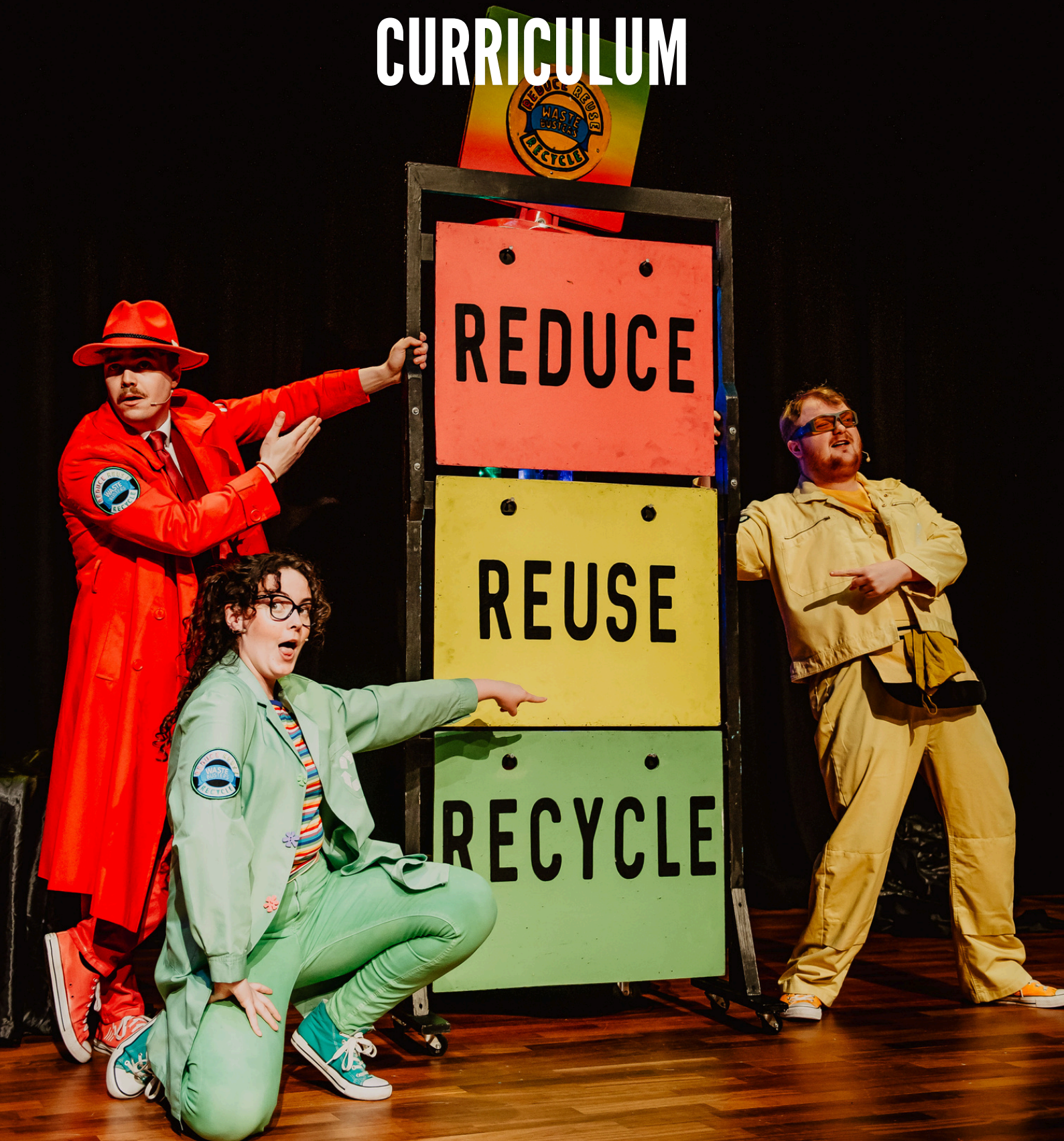


LYRIC THEATRE BELFAST

WASTE BUSTERS

CURRICULUM



INTRODUCTION



Thank you for welcoming the Lyric Theatre to your school for our eco-musical, Waste Busters! We hope you enjoyed this production and the student's feel excited about becoming Waste Busters.

OVERVIEW

This curriculum framework is aimed at KS2 P4-P7 pupils, equipping them with knowledge of eco-topics outlined by Waste Busters and empowering them to make a difference in their daily lives, as well as to strive to make a greater difference in our communities and on our planet.

AIMS

The Lyric Theatre Creative Learning team believes environmental education is important for encouraging children to use their creativity to find solutions to sustainability challenges and to help them believe in their ability to effect change. We created this curriculum and lesson plans to support educators in equipping children with the best possible mindset and resources to create their own sustainable future.

CORE SUBJECT CONTENT

OVERALL LEARNING OBJECTIVES

- DEFINE KEY ENVIRONMENTAL CONCEPTS (I.E. SUSTAINABILITY, BIODIVERSITY, CLIMATE CHANGE, REDUCE, REUSE, RECYCLE, RENEWABLE ENERGY)
- EXPLAIN THE IMPORTANCE OF SUSTAINABILITY FOR THE CLIMATE AND WILDLIFE
- COME UP WITH SOLUTIONS TO ENVIRONMENTAL PROBLEMS, INDIVIDUALLY AND GLOBALLY
- EXPLAIN THE IMPORTANCE OF CONSERVATION AND LIST WAYS TO CONSERVE RESOURCES
- WORK TOGETHER ON CREATIVE PROJECTS
- COMMUNICATE INFORMATION AND ADVICE ON HOW TO BE ECO-FRIENDLY

LESSON PLANS

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RECYCLING CLASS MASCOT

LEARNING OBJECTIVES

PUPILS WILL BE ABLE TO:

- Explain the difference between reuse and recycle
- understand recycling processes
- recognise common recycling symbols
- understand how to organise recycling at home

ACTIVITIES

PURPOSE	SUGGESTED ACTIVITY
ENGAGE suggested timing: 20 minutes	• Show journey of a recycled item • Share statistics of items going to landfill which could be recycled • Show pictures of recycling centres where all the materials are separated • Introduce different recycling symbols and meanings
INVESTIGATE suggested timing: 15 minutes	• Research what recycled items get made into • Organise pictures of items into different recycling categories as if they were bringing the items to a recycling centre eg. cardboard, wood, metal, electricals
CREATE suggested timing: 25 minutes	• Bring clean recyclable items and get the children to organise them for recycling, taking items apart where only part can be recycled • Ask children to bring in some discarded items from home to make recycled creatures/mascots in groups, eg. kitchen roll tubes for arms, eggbox sections for eyes • Pupils can draw different recycling symbols on their mascot or write some recycling tips for the mascot to hold. These can be displayed in class to remind pupils of their reduce, reuse, recycle learning
ACT	• Find out your local recycling rules and follow them at home • Visit your local recycling centre • Wash out recyclable items before putting them in the recycling bin • Introduce a new bin in school for items with the 'recycle at a large supermarket' symbol, and recycle appropriately

CREATIVE TASK: A RECYCLABLE MASCOT

MATERIALS/RESOURCES:

- Clean recyclables
- Scissors, glue, sellotape, pens, papers
- Journey of your recycling: <https://www.youtube.com/watch?v=tJo4IUOPrtM>
- The recycling journey of an aluminium can: <https://www.youtube.com/watch?v=itpptR3W-do>
- Recycling symbols and meanings: <https://www.wastemanaged.co.uk/our-news/recycling/recycling-symbols/>
- Eco schools: <https://www.eco-schools.org.uk/ten-topics/litter/>

TEACHER GUIDANCE NOTES:

- Make sure rubbish is clean before using it in the tasks
- Be aware of sharp tin cans
- Supervise the use of scissors
- Remind pupils that recycling rules differ by locality
- Encourage creativity and teamwork, suggesting roles within groups, e.g. designer, builder, presenter

LEARNING PROGRESSION P5-P7:

- Research specific recycling processes. eg. how a bottle can become an item of clothing
- Write down or make a poster of local recycling rules for them to display in their home

SEASONAL FOOD WHEEL

LEARNING OBJECTIVES

PUPILS WILL BE ABLE TO:

- Explain why locally grown food is better for the environment eg. Less transport, less carbon emissions
- Describe ways to reduce food waste
- Explain why reducing food waste is important and the impact of food waste
- List what foods are native to Ireland
- List what foods are in season throughout the year

ACTIVITIES

PURPOSE	SUGGESTED ACTIVITY
ENGAGE suggested timing: 10 minutes	• Show statistics of food mileage and how far food travels across the world to reach our plates • Show what foods are native to Ireland, show local farms
INVESTIGATE suggested timing: 15 minutes	• Pupils research what vegetables are seasonal in Ireland at different times of the year • Pupils record food waste and packaging in one day or a week • List what countries your foods are from eg. bananas 'grown in Costa Rica'
CREATE suggested timing: 20 minutes	• Pupils make a seasonal food wheel. Example: https://www.bbc.co.uk/bitesize/articles/zb23p4j#zjftbcw • Use months or seasons as sections and draw pictures of foods in each section • You can put a split pin through the centre so the wheel can spin, turn the wheel as the months go by and encourage them to display it at home
ACT	• Shop in local fruit and vegetable shops • Grow at home; take some seeds home • Share food with neighbours and friends

CREATIVE TASK: A SEASONAL FOOD WHEEL

MATERIALS/RESOURCES:

- Card, pens, coloured pencils, rulers, split pins
- Fruit and veg in season each month in Ireland:
<https://www.bordbia.ie/whats-in-season/best-in-season/calendar/september>
- Seasonal food wheel example:
<https://www.bbc.co.uk/bitesize/articles/zb23p4j#zjftbcw>
- Kilkeel potato farm: <https://www.youtube.com/watch?v=lczKvP5lxQk>
- Keelings Fruit Farm Ireland: https://www.youtube.com/watch?v=rSDCxb17_Ys
- <https://www.eco-schools.org.uk/ten-topics/healthy-living/>
- <https://www.eco-schools.org.uk/ten-topics/waste/>

TEACHER GUIDANCE NOTES:

- Remind the pupils it is not always possible to buy seasonal and locally grown food, but it's important to be aware so you can make the more sustainable choice when you can

LEARNING PROGRESSION P5-P7:

- Look up recipes using seasonal foods; try making a recipe at home
- Find local farms; see if they have fruit-picking days to pick your own

WIND ENERGY PINWHEEL

LEARNING OBJECTIVES

PUPILS WILL BE ABLE TO:

- List different types of energy and ways of producing it
- Identify everyday uses of energy
- Explain the difference between renewable and non-renewable energy sources
- Suggest ways to reduce daily energy use
- Understand why renewable energy is better for the environment

ACTIVITIES

PURPOSE	SUGGESTED ACTIVITY
ENGAGE suggested timing: 15 minutes	• Show types of energy sources, renewable and non-renewable, e.g. coal, oil, gas, wind energy turbines, solar energy panels, hydroelectric energy • Show the impact of non-renewable energy on the environment; burning fossil fuels is the biggest cause of climate change • Why we should harness wind, sun, and water energy instead
INVESTIGATE suggested timing: 15 minutes	• Pupils organise items from most to least amount of energy use • Pupils organise renewable and non-renewable energy • Find out companies using the most energy • Come up with ways to use less energy in the home, e.g. only boil the amount of water you need, shorter showers, turn lights off when not in the room
CREATE suggested timing: 15 minutes	• Make a pinwheel to represent a wind turbine, to show how wind energy creates movement of the blades which converts to electric energy
ACT	• Write letters to local companies using lots of non-renewable energy, asking them to use more renewable energy and explaining why they should • Use less energy at home through learned tips

CREATIVE TASK: A WIND ENERGY PINWHEEL

MATERIALS/RESOURCES:

- Paper, straw or stick, pins (suitable for age, drawing pin or split pin), scissors, glue
- Sort energy sources:
<https://drive.google.com/file/d/1cvXSa46n47Y1ivsBepMB8Iz0jeM80o0n/view>
- BBC Bitesize Renewable energy videos and information:
<https://www.bbc.co.uk/bitesize/articles/zgkvdnb#zn3tg2p>
- Wind energy and turbines BBC Bitesize:
<https://www.bbc.co.uk/bitesize/articles/zsdbym#zxx27yc>
- Paper, straw or stick, pins (suitable for age, drawing pin or split pin), scissors, glue
- Sort energy sources:
<https://drive.google.com/file/d/1cvXSa46n47Y1ivsBepMB8Iz0jeM80o0n/view>
- BBC Bitesize Renewable energy videos and information:
<https://www.bbc.co.uk/bitesize/articles/zgkvdnb#zn3tg2p>
- Wind energy and turbines BBC Bitesize:
<https://www.bbc.co.uk/bitesize/articles/zsdbym#zxx27yc>

TEACHER GUIDANCE NOTES:

- For the pinwheels, you could use paper from the paper bin to practice reusing and recycling
- Monitor use of pins, or only allow teacher to put pin in

LEARNING PROGRESSION P5-P7:

- Find out where local wind turbines and solar farms are
- Research further how different renewable energy sources convert energy and how it reaches our homes
- Research further how non-renewable energy harms the planet

WATER CONSERVATION

LEARNING OBJECTIVES

PUPILS WILL BE ABLE TO:

- Explain why water conservation is important
- Suggest ways to reduce water waste
- Identify everyday activities and equipment that use the most water
- Identify how industries, data centres, and agriculture use water
- Understand how they can make a difference and communicate this knowledge to help others do the same

ACTIVITIES

PURPOSE	SUGGESTED ACTIVITY
ENGAGE suggested timing: 20 minutes	• Show how much water is used daily by people and companies • Teach about drought and where water is scarce; show pictures • Show how much water people use in different countries – countries with more and less water access
INVESTIGATE suggested timing: 15 minutes	• Ask how many times do you use water in a day? • Estimate the volume of water used in a day or week, then find out averages. • Discuss what activities use the most water • Discuss ways to reduce water usage
CREATE suggested timing: 25 minutes	• Create posters with ways to reduce water usage, eg., water plants at night, take shorter showers, use less AI. Or with statistics. • Reuse discarded materials which can catch rainwater to use this water for cleaning things/ handwashing in the classroom. This can be attached to a classroom window with a suction cup and brought in when full to put beside the sink. Pupils can get creative with designing these (putting water-saving tips on them, or making them look like animals'
ACT	• Write letters to companies using the most water • Reduce use of high-water-consuming activities such as long electric showers, boiling full kettles, and reducing AI use • Eat less meat, eg. introduce a meat-free day per week at home • Raise money for charities which provide people with clean water

CREATIVE TASK: WATER CONSERVATION

MATERIALS/RESOURCES:

- <https://www.omo.com/za/sustainability/sustainability-for-kids/water-saving-facts-for-kids.html>
- <https://kids.earth.org/life-on-land/understanding-the-importance-of-water-conservation/>
- Water Aid <https://www.wateraid.org/uk>
- <https://www.eco-schools.org.uk/ten-topics/global-citizenship-2/>
- <https://www.eco-schools.org.uk/ten-topics/waste/>
- <https://www.eco-schools.org.uk/ten-topics/water/>

TEACHER GUIDANCE NOTES:

- Ensure pupils know not to reduce water consumption by drinking less water
- Make it clear there are many ways to reduce water consumption, eg., if they can't reduce meat consumption, they can take showers instead of baths

LEARNING PROGRESSION P5-P7:

- Look at water treatment plants and their processes, and explain the steps to making water clean enough for drinking
- Research links between water usage and poverty and climate change
- Research communities and agriculture which use water sustainably

SEED BALLS AND BIODIVERSITY

LEARNING OBJECTIVES

PUPILS WILL BE ABLE TO:

- Explain why water conservation is important
- Suggest ways to reduce water waste
- Identify everyday activities and equipment that use the most water
- Identify how industries, data centres, and agriculture use water
- Understand how they can make a difference and communicate this knowledge to help others do the same

ACTIVITIES

PURPOSE	SUGGESTED ACTIVITY
ENGAGE suggested timing: 15 minutes	• Introduce the terms monoculture and biodiversity • Research what flowers and plants are native to Ireland • Ask pupils where they could benefit from more biodiversity and wildflowers, eg. around school and home
INVESTIGATE suggested timing: 20 minutes	• How many bugs can you find in the playground? • Go to a nearby park or field, use a 1m² square frame or a measured area, and count the insects in that area. Ask are there more in the grass, on tarmac, in a hedge? • Count the types of plants in an area, encourage them to look up the names of plants and bugs
CREATE suggested timing: 20 minutes	• Make seed balls: Native wildflower seeds, clay or flour, soil, water • Seed balls tutorial: https://www.nationaltrust.org.uk/discover/crafts/how-to-make-wildflower-seed-balls
ACT	• Throw seed balls in areas at home, around the city or neighbourhood • Make home garden areas more diverse by planting native seeds and mowing the lawn less to allow insects to live there • Encourage them to monitor the progress, do they see more insects over time?

CREATIVE TASK: SEED BALLS

MATERIALS/RESOURCES:

- Native wildflower seeds, clay or flour, soil, water
- Biodiversity video: <https://www.youtube.com/watch?v=rclOz8Fsbmg>
- Monoculture and polyculture video: https://youtu.be/iawPAJdnzeU?si=OfG_uqVEF71ludFT
- David Attenborough biodiversity video: https://www.youtube.com/watch?v=b6Ua_zWDH6U
- Seed balls tutorial: <https://www.nationaltrust.org.uk/discover/crafts/how-to-make-wildflower-seed-balls>
- Irish wildflowers index: <https://www.irishwildflowers.ie/a-c.html>
- <https://www.eco-schools.org.uk/ten-topics/biodiversity/>
- <https://www.eco-schools.org.uk/ten-topics/school-grounds/>

TEACHER GUIDANCE NOTES:

- Check the weather
- Throw seed balls 24-48 hours before rain
- Source materials from a local supplier if possible
- Throw seed balls responsibly, asking permission where necessary

LEARNING PROGRESSION P5-P7:

- Monitor wildlife over several weeks, record insect numbers and types of plants in a particular area and reflect
- Research cities which have incorporated biodiversity into their streets and buildings

CLOTHES SWAP AND REPAIR STATION

LEARNING OBJECTIVES

PUPILS WILL BE ABLE TO:

- Explain the difference between reuse and recycle
- Recognise different recycling symbols, including the symbol which means the item was partly or fully recycled
- List ways to reuse items in daily life which otherwise would be thrown away
- Understand fast fashion, clothing production and disposal

ACTIVITIES

PURPOSE	SUGGESTED ACTIVITY
ENGAGE suggested timing: 15 minutes	• Show clothes waste statistics, landfill pictures • Show pictures of art exhibitions reusing items for a different purpose • Show pictures of houses reusing items • Fashion using offcuts of clothes or reusing thrown-away clothes
INVESTIGATE suggested timing: 20 minutes	• Show pictures of items thrown away after use; ask pupils to come up with ideas of how they can be reused • Ask pupils to come up with items that can be reused, e.g. reusable coffee cups or tin cans to plant seeds in. • Ask pupils to come up with solutions to clothing problems eg. missing button, a hole, a stain, trousers too long • Ask pupils to come up with ideas that would make them wear clothes more, eg. would they wear a certain T-shirt more if it had a design on it?
CREATE suggested timing: 20 minutes	• Set up a clothes swap with a repair station and design station for your school or class • Learn different simple repair methods • Make designs to put on clothes eg. with fabric pens, patches, sequins • Make posters to put around the school, inviting pupils and advising them to bring clean clothes from home they want to swap

ACTIVITIES

PURPOSE	SUGGESTED ACTIVITY
ACT	• Use less single-use plastic • Use your own water bottles instead of buying plastic water bottles • Swap clothes with friends instead of buying new ones • Buy from second-hand websites and charity shops instead of buying new

CREATIVE TASK: REPAIR STATION

MATERIALS/RESOURCES:

- Peel and stick patches, fabric pens, sequins, blunt child-friendly needle and thread
- Fast fashion and clothing waste information: <https://www.keepbritaintidy.org/fast-fashion-and-textile-waste>
- Wastebusters clothing repair videos: <https://www.wastebuster.co.uk/resources/toolkit/sew-it-mend-it-make-it-video-toolkit/45>
- Environmental impact of fast fashion: https://www.youtube.com/watch?v=oqCQTtemR_k

TEACHER GUIDANCE NOTES:

- Assess abilities for repair and design stations
- Ensure children know that the clothes must be clean in order to swap
- You can send a note home to parents to let them know

LEARNING PROGRESSION P5-P7:

- Older pupils can learn to sew on a button or a patch, or to stitch a hole closed
- Further research into links between fast fashion, waste and climate change

TRANSPORT

LEARNING OBJECTIVES

PUPILS WILL BE ABLE TO:

- Identify different types of transport
- Order which transport is most and least eco-friendly
- Plan journeys with eco efficiency in mind
- Describe impact of transport on environment
- Describe health benefits of certain transports eg. walking, cycling

ACTIVITIES

PURPOSE	SUGGESTED ACTIVITY
ENGAGE suggested timing: 15 minutes	• Show different types of transports • Ask class to organise transports from most to least environmentally friendly
INVESTIGATE suggested timing: 15 minutes	• In pairs, pupils plan routes and transport options for different journeys, eg. from school to a friend's house, or from home to town centre. • Compare different routes based on cost, time, health benefits, distance, and carbon impact • Ask how a city or local area can be made safer for pedestrians and cyclists
CREATE suggested timing: 20 minutes	• Make posters about the benefits of walking, cycling, scooting, over using cars • Encourage creativity, eg. a poster showing how a more eco-friendly town would look, with cycling lanes and trains • Put posters up around the school to educate and remind other pupils
ACT	• Car share with friends to school • Use public transport, cycle, walk more • Have one car-free day a week

CREATIVE TASK: TRANSPORT

MATERIALS/RESOURCES:

- iPads to look at maps and routes, local maps, paper, pens, pencils, rulers
- BBC Bitesize sustainable transport videos and information:
<https://www.bbc.co.uk/bitesize/articles/zyyw8hv#zv847v4>
- <https://www.eco-schools.org.uk/ten-topics/healthy-living/>
- <https://www.eco-schools.org.uk/ten-topics/transport/>

TEACHER GUIDANCE NOTES:

- Emphasise road safety and safe routes to walk
- Ensure pupils know that it is not always possible to walk or cycle somewhere; be sensitive to pupils who cannot walk/cycle to school for various reasons

LEARNING PROGRESSION P5-P7:

- Understand how certain transport produces emissions and how that affects the environment
- Connect transport emissions to climate change
- Suggest improvements to local area for more sustainable transport options

CLIMATE CHANGE, MARINE LIFE AND LITTER

LEARNING OBJECTIVES

PUPILS WILL BE ABLE TO:

- Explain what climate change is and what it causes (rising oceans, storms, heatwaves)
- Outline how litter affects wildlife, and the journey it makes to the sea
- Explain how climate change affects wildlife
- List ways to reduce plastic waste
- Repurpose waste materials
- Work together to make a piece of art with a message

ACTIVITIES

PURPOSE	SUGGESTED ACTIVITY
ENGAGE suggested timing: 15 minutes	• Show images of coral reefs over time due to climate change • Show images of rubbish on beaches and in oceans, and affecting wildlife • Ask how rubbish could make its way to the sea • Explain how climate change affects oceans eg. coral bleaching, ocean acidity, rising levels, disruption of ecosystems • Explain how pollution and plastics kill marine animals, and how overfishing is unsustainable
INVESTIGATE suggested timing: 10 minutes	• Research how long it takes for different items to completely disappear, eg. apple core, piece of paper, cotton t shirt, toothbrush, microwave • Research more sustainable options and materials eg. bamboo toothbrushes, cotton clothes
CREATE suggested timing: 25 minutes	• Use discarded materials, rubbish, and arts and crafts materials to create a healthy marine life , eg a colourful coral reef with crabs made out of yoghurt pots, fish scales from tinfoil

ACTIVITIES

PURPOSE	SUGGESTED ACTIVITY
ACT	• Integrate more biodegradable items into daily life, eg. wooden brushes, bamboo toothbrush • Use refill centres, bring your own container and fill up everyday items eg. pasta, rice, soap, shampoo • Pick up rubbish safely and put it in the bin in and around your school and home

CREATIVE TASK:

MATERIALS/RESOURCES:

- Clean rubbish/ recyclable materials
- Pens, art materials, coloured paper, glue sticks, scissors
- Blue Peter Beach Clean: <https://www.youtube.com/watch?v=JDG5ml8S4tl>
- Marine Trash and plastics: <https://www.youtube.com/watch?v=uCFxnygCmYU>
- Coral Reefs and Climate Change: <https://www.wwf.org.uk/coral-reefs-and-climate-change>
- Journey to Ocean via Rubbish <https://www.youtube.com/watch?v=vh6MDuxYing&t=1s>
- <https://www.eco-schools.org.uk/ten-topics/global-citizenship-2/>
- <https://www.eco-schools.org.uk/ten-topics/litter/>
- <https://www.eco-schools.org.uk/ten-topics/marine/>
- <https://www.eco-schools.org.uk/ten-topics/school-grounds/>

TEACHER GUIDANCE NOTES:

- Suggest types of rubbish for kids to bring in, make sure they are clean and safe for use
- Encourage group work, with assigned roles (presenter, designer, etc)
- Monitor use of scissors and potentially sharp items

LEARNING PROGRESSION P5-P7:

- Learn how litter and climate change are linked
- Learn how coral reefs and other ocean plants are good for the planet's health
- Learn about impact of microplastics

VEGETABLE / FRUIT / HERB PATCH

LEARNING OBJECTIVES

PUPILS WILL BE ABLE TO:

- Explain why growing own food is good for environment and health, eg. less plastic waste, whole foods, unprocessed
- Understand how to grow own food
- Explain why reducing food waste is important
- List what foods are native to Ireland
- List what foods are in season throughout the year

ACTIVITIES

PURPOSE	SUGGESTED ACTIVITY
ENGAGE suggested timing: 15 minutes	• Show pupils information and statistics on food waste • Show plastic waste from bought food • Show pictures/ video on community gardens, self-sufficient home/communities • Show a video of fruit and vegetable plants growing from seed
INVESTIGATE suggested timing: 15 minutes	• Pupils research what vegetables are seasonal in Ireland at different times of the year • Pupils record food packaging in one day or a week • Research types of native food plants and how to care for them
CREATE suggested timing: 20 minutes	• Plant a fruit, vegetable or herb patch on school grounds • Or plant individual pots in classroom using recycled materials as pots • Or visit a local community garden for a tour • Put collected information on these plants on posters/ information leaflets to refer to throughout growing process
ACT	• Shop in local fruit and vegetable shops • Grow at home, take some seeds home • Share food with neighbours and friends

CREATIVE TASK: CLASS GARDEN

MATERIALS/RESOURCES:

- Recycled pots for growing inside or planters for outside/ school grounds vegetable patch
- Soil, Seeds for vegetables, fruit or herbs
- Trowel, watering can or container
- Paper and pens/pencils from information poster/leaflet
- From seed to harvest: <https://www.youtube.com/watch?v=PR8WOMkSxUA>
- Youtube channel where a man grows all his food and makes meals from scratch <https://www.youtube.com/@fromscratch.withbob/shorts> example video: https://www.youtube.com/shorts/kcMC_UWOpW4
- <https://www.eco-schools.org.uk/ten-topics/healthy-living/>
- <https://www.eco-schools.org.uk/ten-topics/school-grounds/>

TEACHER GUIDANCE NOTES:

- Use native seeds from sustainable sources
- Give roles in class, or visual reminders of when to water the plant or when to check on them

LEARNING PROGRESSION P5-P7:

- Research food preservation methods eg. Pickling
- Learn what countries are foods are grown in, encourage them to notice the country of origin on their bought foods, or look in the supermarket