

TECHNOLOGY

YEARS 1-4

THE WORLD OF MACHINES

CURRICULUM

Technology:	Technology and Society Technological Capability
The Arts	Developing Ideas in Music and Dance

LEARNING INTENTIONS

- Investigate and explore the principles of machines
- Investigate ways of making the sounds and rhythms of machines
- Develop movement and elements of dance in response to mechanical sounds

SKILLS USED AND DEVELOPED

- Construction: of demonstration models
- Using sound and dance sequences to convey messages
- Cooperation with others in arts activities for pleasure

SUCCESS CRITERIA

- Discuss and share knowledge of machines, the work they do and the power that drives them
- Draw and write about your favourite machine
- Go on a machine hunt at home and school finding out how they work and how safe they are
- Know which machines we are allowed to use and not allowed to use. Make a list and create a display.
- Create a sound picture with machine words and experiment with rhythms to make different machines
- Use dance movements to create a machine dance to fit a sound picture and enjoy sharing it with the class.
- Plan, design and construct an imaginary machine to carry out special work.

MOTIVATION

DISCOVERING MACHINES

- Collect pictures of machines from magazines and books. Have the students cut out the machines and make a large wall chart.
- Discuss work the machines “do” and add captions and sentences to the Machine Chart.

ORAL DESCRIPTION

- Encourage each student to talk about their favourite machine on the wall chart. Have them guess/speculate
 - What is used for?
 - What is it called?
 - Where is it used?
 - Who mostly uses this machine?
 - When would it be used?

- How does it make work easier?
- What type of power drives it? (*a push mower is human powered*)

A MACHINE HUNT

- Go on a machine hunt around the school to try and find different machines. Look in the caretakers shed, the staff room, the classroom, the office etc. Examples could include - a computer, a typewriter, a lawn mower, a microwave oven, a car, a bike, photocopier, vacuum cleaner ...
- Make a list of machines found around the school.
- Discuss how these machines make work easier and add to the list.
- Back in the classroom make a list of the machines the students have found around the school and the jobs (tasks) they perform.
- Ask the students to look at home for machines that are used in the kitchen, in the garden, in the bathroom. Have them report back to the class on what they found.
- Discuss what machines they are allowed to use at home. What machines are they not allowed to use? Give reasons for this.
- What they used for and how do they use them, and how do they help us?

A MACHINE DISPLAY

- Encourage the students to ask if they can bring along a machine from home.
- Create a machine display in the classroom. Have the class write labels and/or brief descriptions about the machine they like best, where the machine is used, and how it helps us.

VOCABULARY LIST

- Run several of the machines and have the students listen to the sounds that they make.
- Have the class describe the sounds the machines make.
- Encourage the students to make up words that describe the sounds of the machines. These new machine words can be placed on a machine vocabulary list.

SOUND PICTURE

- Have groups make and chant these machine words. Chant them slowly, quickly, up high, down low, in the middle, in pairs, in succession, all together.
- Decide on a sequence for your sound picture. Perform to other classes.

MACHINE MUSIC

- Try the following machine music.
- Divide the class into five groups.
- The music moves in threes, with each group coming in with their

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own part in succession.

Group One - Boom Boom Boom- Punch fist into hand - Count is 1 2 3

Group Two - Yum Chiddy Chuck - Clap hands - Count is 1 2 & 3

Group Three - Inka Bah Doo - Slap legs - Count is 1 2 & 3

Group Four - Rata Tat A Tat A - Slap legs - Count is 1 & 2 & 3 &

Group Five - Shh Mnn Shh - Make piston with arm - Count is 1 2 3

- When they are all going, cut out various groups, start them again etc.
- Move your hand up and down to indicate volume.

A MACHINE DANCE

- Have each group make up a movement sequence to go with their music. Aim to have all the group joined, or working together in some way.
- Have each group show their movement sequence to the class as they say their music words at the same time.
- Join all the groups together and have the machine sounding and moving.
- Ask what they think this machine does.

INVENT DRAW AND WRITE

- Have the children draw/make a machine that they invent.
- What does their special machine do?
- What is it called?
- Have the children write a label/caption to put on the bottom of their picture.
- Make a big book for shared reading from the pictures and labels /captions.

CONSTRUCT

- Using thin cardboard, construct a machine that lifts up the white line in the middle of the road, ties it in a knot and puts it back down again.
- Have every student cut out and paint their part of the machine. Encourage different shapes such as circles, squares, rectangles, irregular shapes and bright colours.
- Build the machine. The shapes could be attached to a large fridge carton. Make it colourful.

FACTORY VISIT

- If possible, arrange for a factory visit. Speak to people who work machines.
- Before you visit, check it out yourself and with the class, prepare a list of questions they would like answered, eg
 - *What jobs do the machines do?*
 - *Was it difficult to learn how to use them?*

- Record your factory visit in visual and written form.
- Invite machine workers to your classroom to talk about their work and answer prepared questions.

MACHINE SAFETY

- Many machines have some element of risk attached to their use. Discuss this with the class and have them make machine safety posters and give oral reports on machine safety including a practical demonstration.

CULMINATING ACTIVITIES

- Have a machine sound concert using machines brought from home and found around the school.
- Use egg beaters, electric tooth brushes, vacuum cleaners, hair driers, computer printers, electric carving knife, record player.
- Have them play in succession, in pairs, together
- Invite other classes to the concert.
- Take an opinion poll on reactions to the concert.
- Did the listeners like or dislike it? Why?
- Paint pictures and write stories about the machine concert for classroom wall chart display.

ASSESSMENT CRITERIA

- Showing a knowledge of the technology involved with machines and the understanding that they need power in order to do work - when sharing results of the machine hunt.
- Understanding that machine make regular movements and a variety of noises when creating a sound picture.
- Appreciation of the energy and actions of machines when choosing movements to create a machine dance
- Ability to choose a design, choose materials and choose tools for construction when creating an imaginary machine.