

# **Appendix B- Lesson plans**

## Lesson 1 - Floating and sinking

### Groupings:

Infants = Junior infants and senior infants

1<sup>st</sup>/2<sup>nd</sup> class = Grouped as a class

### Objectives:

1. The child should be enabled to investigate how forces act on objects *i.e.*, floating or sinking.
2. The child should be encouraged to classify objects under the headings of floating and sinking.
3. The child should be enabled to take part in an active investigation.

### Resources:

Three spoons, Lego, coins, rubbers and various classroom objects

Three basins filled with water

Newspaper (to cover tables)

Plasticine

Prediction recording posters (x 2)

1<sup>st</sup>/2<sup>nd</sup> class record sheet

### Introduction:

Talk about why things sink or float. Take suggestions. Take some predictions on whether or not an object will float or sink.

### Development of lesson:

Each table has a selection of objects on it. The children have to pick an object. The children draw or write their predictions on either the sink or float posters. The children have to test their predictions in rotation to see if they are correct or incorrect. The infants have to report to the teacher later in the lesson. 1<sup>st</sup>/2<sup>nd</sup> class record their findings on a piece of paper. 1<sup>st</sup>/2<sup>nd</sup> continue with task while the infants feedback their findings. Next they have to take the objects they tested and place on the correct poster *i.e.* sink or float. 1<sup>st</sup>/2<sup>nd</sup> feedback their results to the class.

### Conclusion:

(Question Time) Where any predictions correct or incorrect? Talk about what made the objects float or sink. Talk about the plasticine. Did it float or sink? Give everyone a piece. Can we make it float? After some attempts give clues such as check the shape *etc.* How did we make the plasticine float?

## Lesson 2 - Making shadows

### Groupings:

Infants = Junior infants and senior infants

1<sup>st</sup>/2<sup>nd</sup> class = Grouped as a class

### Objectives:

1. The child should be enabled to explore how shadows are formed.
2. The child should be encouraged to observe the shape and orientation of shadows.
3. The child will be facilitated to describe the formation of shadows.

### Resources:

Torches

Area along wall/board

Classroom objects

Infant worksheet

1<sup>st</sup>/2<sup>nd</sup> class worksheet

### Introduction:

(Question Time) Discuss the children's ideas about shadows and what they are. Ask questions such as, How are they made? What has a shadow? *Etc.*

Go outside to see if the children can find their own shadows. Make the shadow longer/shorter.

### Development of lesson:

Divide the children into their groups. Each group has one torch (classroom lights out). Infants are given the task of trying to make animals from their hands' shadows. 1<sup>st</sup>/2<sup>nd</sup> class have to create numbers. Teacher circulates asking questions such as, what is making the shadow. *Etc.* Next task is to let everybody in the class pick a classroom object to try and find its shadow. Finally infants have to try to draw the shadows which belong to three objects. These are a tree, a person and a ball. 1<sup>st</sup>/2<sup>nd</sup> class have to fill in a worksheet on shadows describing how to make shadows longer and shorter and explain what you need to make a shadow.

### Conclusion:

Have a brief recap on what the children did in their tasks. Talk with the 1<sup>st</sup>/2<sup>nd</sup> class about making shadows. How can we describe this? What objects do not have shadows?

## Lesson 3 - Properties and characteristics of materials

### Groupings:

Infants = Junior infants and senior infants

1<sup>st</sup>/2<sup>nd</sup> class = Grouped as a class

### Objectives:

1. The child should be enabled to observe and investigate a range of familiar materials from the classroom.

2. The child should be encouraged to note differences in the materials in relation to soaking up water

3. The child will be facilitated to group objects in relation to these differences

1<sup>st</sup>/2<sup>nd</sup> will be helped to construct a fair test.

### Resources:

paper

tissues

cloth

plastic

wool

wood

rubber

water

plates x 3  
water)

signs (soaks up water/does not soak up

### Introduction:

(Question Time) Talk about a wet day. Ask the children what would they wear and questions such as what is it made from and why? *Etc.*

### Development of lesson:

The teacher places a collection of classroom materials on each groups' table. Infants have to test, in rotation, each object to see if it soaks up any water. They then have to place their material on the appropriate sign, either soaks up water/does not soak up water (they have pictures for guides). 1<sup>st</sup>/2<sup>nd</sup> class have a similar task. Ask the children how to make the test fair. Point out that there may not be the same amount of water left on the plate. How can the children solve this? Next they have to line up the materials in order of most absorbency to the least absorbency.

### Conclusion:

Have a brief recap on what the children did in their tasks. Talk about the materials in relation to their rainwear. Which materials would be the best to choose for a raincoat?

## Lesson 4 - Pushing and pulling

### Groupings:

Infants = Junior infants and senior infants

1<sup>st</sup>/2<sup>nd</sup> class = Grouped as a class

### Objectives:

1. The child should be enabled to explore how objects may be moved by pushing and pulling.
2. The child should be encouraged to identify and classify objects which are pushed and pulled.
3. The child will be enabled to observe and investigate the movement of cars on various surfaces.

### Resources:

toys

phone (toy)

pens/pencils

schoolbag trolley

pictures to sort

paper

cars

different scrap materials

rulers

books

### Introduction:

(Question Time) Take suggestions of things that move in some way in the classroom. Write them on the blackboard. Talk about what each needs to make them move. Show toys. Do we push or pull each one?

### Development of lesson:

Divide up the pictures and distribute to the children. Show the push and pull chairs (labelled). Get the infants to place their object on the correct chair. 1<sup>st</sup> and 2<sup>nd</sup> class record their answers on a sheet. Next the infants have to draw three of the things that they can pull and three things that they can push. Talk to 1<sup>st</sup> and 2<sup>nd</sup> class about what helps things move over an area quicker/easily. Use a car as an example (Wheels are the answer). Give each child a car and ask them to firstly slow the car down and secondly make it go faster. Mention a ramp and the surface over which it will move as hints.

### Conclusion:

Have a brief recap on what the children in 1<sup>st</sup> and 2<sup>nd</sup> class found out. Show each of the infants' pictures and get them to name the items if there is time.

## Lesson 5 - Magnetism

### Groupings (in pairs):

Infants =	Jack & Ellen	Tom & May	Kevin & Eve
	Mags, Lara & Beth	Tim & Bob	Chris & Tony
1 <sup>st</sup> /2 <sup>nd</sup> class =	Pat & Ann	Donal & Tara	John & Jen

### Objectives:

1. The child should be enabled to use magnets of different shapes and sizes in purposeful play.
2. The child should be encouraged to note and investigate that magnets can attract certain materials (paperclips) through paper.
3. The child will be facilitated to construct a simple game using magnets.

### Resources:

Worksheet for 1 <sup>st</sup> /2 <sup>nd</sup>	worksheet for infants
3 boxes	wool
paperclips	

### Introduction:

(Question Time) What is a magnet?  
Where can you see one?  
What can you use it for?  
What does it look like? Colour? Shape?

Show the box of assorted magnets.

### Development of lesson:

Divide into groups. Whose magnet can pick up the most paperclips? Let each group choose a magnet. 1<sup>st</sup>/2<sup>nd</sup> look at the various magnets and complete the sheet (questions such as which magnet do you think is the strongest and why) Talk about results. Infants get jungle sheet. They have to bring their paperclip along the road using the force of the magnet. Make it harder. Do you think that the magnet would work if we put it under the paper? Try it out and bring your magnet along a different route. 1<sup>st</sup>/2<sup>nd</sup> class can begin to make their fishing game. They work in pairs. At certain intervals ask how they are getting on and ask them to describe what they are doing.

### Conclusion:

Have a brief recap on what the children did in their tasks. Get the infants to tell the 1<sup>st</sup>/2<sup>nd</sup> class what happens when a magnet is under the paper. Ask each group to give an oral report on what they did and how to use their game.

## Lesson 6 - Caring for our locality and planning our locality

### Groupings:

Infants = Jack & Ellen Tom & May Chris & Tony  
Eve, Tim & Bob Mags, Lara & Beth  
1<sup>st</sup>/2<sup>nd</sup> class = Pat & Ann Donal & Tara John & Jen

### Objectives:

1. The child should be enabled to observe and investigate a range of familiar materials from the classroom which could be considered litter.
2. The child should be encouraged to note familiar objects we can recognise that tell us we are in our school.
3. (1<sup>st</sup>/2<sup>nd</sup>) The child will be facilitated to draw a simple plan of the classroom.

### Resources:

Classroom objects litter  
Story book Infants worksheet  
paper

### Introduction:

(Question Time) Talk about what litter means. Ask for ideas. What is used to keep our litter together? In the classroom? 1<sup>st</sup>/2<sup>nd</sup>, what do people who want to go somewhere use for help? Maps. Atlas *etc.* Talk about places you like to go in the locality. Beach... What would it be like with litter?

### Development of lesson:

Read Little Red Riding Hood to the children. Can you see any litter in the woods? Ask for suggestions on how Little Red Riding Hood could find her way home. Give infants the worksheet with the way to granny's house and home on it. Infants have to map Little Red Riding Hood a safe journey through the woods away from the wolf. Get the children to insert a litter bin somewhere in the wood. 1<sup>st</sup>/2<sup>nd</sup> class will try to draw a simple plan of our clean classroom. Describe about a fly on the ceiling *etc.* Discuss how we could make it easy to draw. Pay special attention to the location of our bins.

### Conclusion:

Have a brief recap on what the children did in their tasks. Ask infants to describe where the bin is for Little Red Riding Hood *i.e.*, next to the cat. Get 1<sup>st</sup>/2<sup>nd</sup> class to tell any improvements they could make in our classroom in order to catch all our rubbish.

## Lesson 7 - Magnetism (2) & reactions

### Groupings:

Infants = Jack & Ellen      Tom & May      Eve, Tim & Bob  
Chris & Tony      Mags, Lara & Beth  
1<sup>st</sup>/2<sup>nd</sup> class = Pat & Ann      Donal & Tara      John & Jen

### Objectives:

1. (Infants) The child should be enabled to observe and investigate a range of familiar materials to see if they are attracted by the magnet.
2. The child should be encouraged to note the similarities in the attracted objects.
3. (1<sup>st</sup>/2<sup>nd</sup>) The child should be enabled to investigate how materials may be changed by mixing.
4. The child will be enabled to see the change that happens to clay when left to dry out.

### Resources:

Infant worksheet      1<sup>st</sup>/2<sup>nd</sup> worksheet  
Paperclips      cotton wool  
Peg, pencil, spoon, safety pin, button, eraser, key, coin, ruler, zip, book, leaf, Screw and scissors  
Newspaper, vinegar, clay and baking powder

### Introduction:

(Question Time) Recap with whole classroom about what they remember about magnets. What happens if you use a magnet through paper? Can you remember?

### Development of lesson:

(Infants) Children are given a worksheet containing half of the objects mentioned in the resources. (Other children get the other half to discourage copying). Children predict whether or not the objects will be attracted to the magnet, then cut it out and stick it on the correct section.  
(1<sup>st</sup>/2<sup>nd</sup> class) Children are going to make a volcano out of the clay. Show the worksheet with the volcano on it. Leave the children to construct by themselves.

### Conclusion:

Take predictions from the children on whether or not the magnet will attract the object. Pick children to test the predictions. Were you right? Look at all the things that were attracted. Have they anything in common? (1<sup>st</sup>/2<sup>nd</sup> class) Let the children spoon some baking powder into their volcano. What do you think will happen when we add vinegar? Test it. Explain what happened? Can you make the reaction less/more?

## Lesson 8 - Body parts

### Groupings:

Infants = Jack & Ellen      Tom & May      Eve, Tim & Bob  
             Chris & Tony      Mags, Lara & Beth  
1<sup>st</sup>/2<sup>nd</sup> class = Pat & Ann      Donal & Tara      John & Jen

### Objectives:

1. The child should be enabled to name and identify some external parts of our bodies and talk about what function each has.
2. The child should be able to construct a simple picture of a body in the correct manner.
3. The child should be encouraged to write the names of some parts of the body.
4. (1<sup>st</sup>/2<sup>nd</sup>) The child will be enabled to match labels to the body parts.

### Resources:

Body worksheet (parts muddled)      Paper  
Body parts (label sheet)      scissors  
Glue

### Introduction:

(Question Time) List all the parts of the body on the blackboard that the children can think of. Play a game of identify the part where the teacher calls out a different part of the body and the children have to point to it on their body *e.g.*, arm, head, knuckle.

### Development of lesson:

Give each child a sheet with the muddled up body. They must cut it out and stick it to the paper in the correct way. Infants can colour and the fast finishers can write in the names of a few of the parts. After 1<sup>st</sup>/2<sup>nd</sup> class have assembled their bodies (no colouring) they can continue to worksheet 2. They must attach the correct labels to the correct part of the body.

### Conclusion:

Have a brief recap on what the children did in their tasks. See how many parts they can name now (have the others rubbed off already). Show the bodies that have been stuck together. Discuss them. Ask the children to pick out good things about them *e.g.* good colouring, straight legs.

## Lesson 9 - Look outside

### Groupings:

Infants = four year olds, five year olds and six year olds  
1<sup>st</sup>/2<sup>nd</sup> class = individual tasks

### Objectives:

1. The child should be enabled to observe, discuss and identify a variety of plants in the immediate environment.
2. The child should be encouraged to use the correct names of parts of plants when describing the plant *e.g.*, stem, leaf, petal *etc.*

### Resources:

Nine large hoops  
A4 sheets numbered 1-3  
Objects such as a stick, rubbish or stone to place in infants' hoops  
Pencils  
Infant worksheets  
1<sup>st</sup>/2<sup>nd</sup> class worksheets

### Introduction:

Brief discussion on things we might find growing outside. Take examples. What does growing mean? Have a brief discussion. Explain that we are going outside and everyone has got something to find out. Divide into groupings.

### Development of lesson:

Discuss the nature of the tasks *i.e.*, Infants will have to locate a numbered hoop (1-3) somewhere in the school grounds and must fill on their sheet in the correct hoop anything which they can see inside the hoop. The children can draw these. They will switch hoops at a given time until they have visited the three hoops. The teacher will direct the groups to find hoops at the correct interval by blowing the whistle each time a group is to search *i.e.* find the initial hoops in rotation to avoid confusion. 1<sup>st</sup>/2<sup>nd</sup> class each take their own hoop and place it somewhere in the grounds. They then have to follow a worksheet asking them to count how many of four different flowers that they can find in their hoop. Stress it is their choice where they think the hoop should be placed.

### Conclusion:

(Question Time) Discuss the findings with the children. Get them to name the parts of the flowers. Did anyone find something that was not growing? Did 1<sup>st</sup>/2<sup>nd</sup> class have any problems? List what the children found on the blackboard.





## Lesson 12 - Colours

### Groupings:

Infants = Jack & Tom          Ellen & May          Eve & Beth  
                 Chris & Bob          Mags & Lara          Tony & Tim  
1<sup>st</sup>/2<sup>nd</sup> class = Tara, Jen & Ann          Donal, John & Pat

### Objectives:

1. The child should be enabled to observe and begin to investigate how mixing paints can make new colours.
2. The child should be encouraged to have a hands-on role in an experiment.
3. (1<sup>st</sup>/2<sup>nd</sup>) The child will be helped to relate the abstract to the concrete through discussing colours in the context of the classroom.

### Resources:

Spinner worksheets	paint
water	paintbrushes
paint trays	scissors

### Introduction:

(Question Time) Name as many colours as you can. The teacher lists them on the blackboard. Think of things that are blue. Go around the classroom. Orange. Who can think of anything that is orange?

### Development of lesson:

Divide into groups. Get the infants to draw or write as many red things as they can think of. 1<sup>st</sup>/2<sup>nd</sup> must think of five red things and write or draw them. Then if having enough time think of yellow, green and blue things. Discuss the findings briefly. Next the children must paint their spinner the appropriate colours following the instructions on the blackboard. Talk about mixing colours. What shall we use to make green? Get children to mix the colours. Do the same for orange and purple.

### Conclusion:

Help the children to insert a pencil through the middle of the spinner. Test the spinner. Do you notice something about the colours? Get each group to try their spinner.

## Lesson 13 - Sounds

### Groupings:

Infants = Jack & Tom      Ellen & May      Eve & Beth  
            Chris & Bob      Mags & Lara      Tony & Tim  
1<sup>st</sup>/2<sup>nd</sup> class = Tara, Jen & Ann      Donal, John & Pat

### Objectives:

1. The child should be enabled to recognise and identify a variety of sounds in the environment.
2. The child should be encouraged to make different sounds with their voice.
3. (1<sup>st</sup>/2<sup>nd</sup>) The child will be helped to recognise the different instruments which use blowing, shaking, plucking and banging as ways to make their noise.

### Resources:

Sound recording worksheets	sound poem
Glue	instruments
Instrument worksheet	scissors

### Introduction:

(Question Time) Think about your journey home. What sounds do you normally hear? The teacher lists them on the blackboard. What would you hear in the school yard? List.

### Development of lesson:

Give each child a sound sheet for themselves. Everyone must be quiet for one minute and then draw what they heard. Go around all the children and see what they heard. Divide into groups. Show the musical instruments. Ask children to guess how each makes a noise. What do you have to do to it? Bang, pluck, shake and blow. Test them. 1<sup>st</sup>/2<sup>nd</sup> class get a worksheet on which to group instruments under the above headings. They must work in their groups. Infants can say the sound poem and make various noises that go with the words.

### Conclusion:

Check through the instrument sheet and recite the poem altogether.

## Lesson 14 - Air

Groupings (Mixed gender & age: similar intelligence):

Tara, Lara & Chris  
John, Mags & Tom  
Bob

Donal, May & Beth  
Jen, Tony & Ellen

Pat, Eve & Jack  
Ann, Tim &

### Objectives:

1. The child should be enabled to become aware of and explore how moving air can make things move.
2. The child should be encouraged to have a hands-on role in an experiment and in a group setting.
3. (1<sup>st</sup>/2<sup>nd</sup>) The child will be helped to relate the abstract to the concrete through using classroom objects for the experiment.

### Resources:

Air test worksheets  
Straws, balloon, feather, leaf, book, paper clip, pencil, sheet of paper, lunch box, pencil case, apple and sharpener  
Colours

### Introduction:

(Question Time) What makes things move? What makes a kite move? Can you think of other things that you would be able to move by blowing?

### Development of lesson:

Divide into groups. First each group must write or draw as many of the objects mentioned in the question time. Next each group gets a worksheet which will give them a list of objects that they must collect and use the straw to see if they can blow them. They must work as a group. They must colour the objects which can be moved. Leave the others blank or write no under them. Make sure everybody has a go.

### Conclusion:

Discuss everyone's findings. Did everyone come up with the same answers? Ask various children in various groups for their answers. Were there any surprises?

## Lesson 15 - Minibeast hunt

Groupings (Mixed gender & age: similar intelligence):

Tara, Lara & Chris  
John, Mags & Tom  
Bob

Donal, May & Kevin  
Jen, Tony & Ellen

Pat, Eve & Jack  
Ann, Tim &

### Objectives:

1. The child should be enabled to become aware of and observe different minibeasts in the school habitat in a none threatening manner (to minibeast and to any child who has an aversion to creatures).
2. The child should be enabled to identify and observe different minibeasts in their natural surroundings.
3. The child will be helped to recognise and name some of the parts of a minibeast.

### Resources:

Paper  
Pencils  
Picture of a worm

Minibeast worksheet  
colours

### Introduction:

(Question Time) Show the picture of the worm or any other minibeast. Ask the children what it is. Where does it live? Have you seen one? Where was it? If I went out into the garden what other creatures would be living there?

### Development of lesson:

Divide into groups. Discuss the best places to find minibeasts (under stones, along the wall *etc.*) Show each group their worksheet. Each group must go outside together and remain in a group. They have to find two minibeasts each and fill in the information on the sheet when they return to the classroom. Remember to look carefully at the creature. Count its legs and antennae. Remember where you found it *etc.* Go outside and let the children find some creatures. They do not need to touch them merely observe them.

### Conclusion:

Return to the classroom to complete the worksheet. The teacher will circulate asking questions of the various members of each group. The oldest child can fill in the worksheet. Infants can draw and name the minibeasts their group found. Discuss everyone's findings. How many different minibeasts did we find? List their names.

## Lesson 16 - Minibeast collection

Groupings (same gender, similar intelligence and participation levels.):

Tara, Mags, Lara and Eve  
Ann and Ellen  
Pat, Chris and Tom

Donal, Tony and Jack  
Jen, Beth and May  
John, Kevin, Tim and Bob

### Objectives:

1. The child should be enabled to become aware of and collect different minibeasts from the school habitat.
2. The child should be enabled to identify and observe different minibeasts in classroom surroundings by means of a pooter and collection jar.
3. The child will be helped to recognise and name and record some of the parts of a minibeast.

### Resources:

Paper  
Pencils  
Lesson 14 worksheets  
Collection jars

Minibeast worksheet  
colours  
Pooters

### Introduction:

(Question Time) Show the worksheets from Lesson 14. Can you remember what your group collected? What were their names? Can you remember where a good place to collect minibeasts is? Show the pooter. Talk about it and demonstrate how it is used (outside).

### Development of lesson:

Divide into groups. Encourage each group to try to collect at least one minibeast for observation. Demonstrate to children who are unsure of the pooter. Take the pooters and collection jars inside and decide which of the minibeasts you are going to describe. Explain the worksheet to the children. Count the number of legs, body parts, eyes and antennae. Draw and label the parts. Give out paper to anyone who wishes to draw their own choice.

### Conclusion:

Find out what each group collected. Are there similarities or differences in the number of legs? *Etc.* Return the minibeasts outside and talk about why that is important.