

Science - Year 6

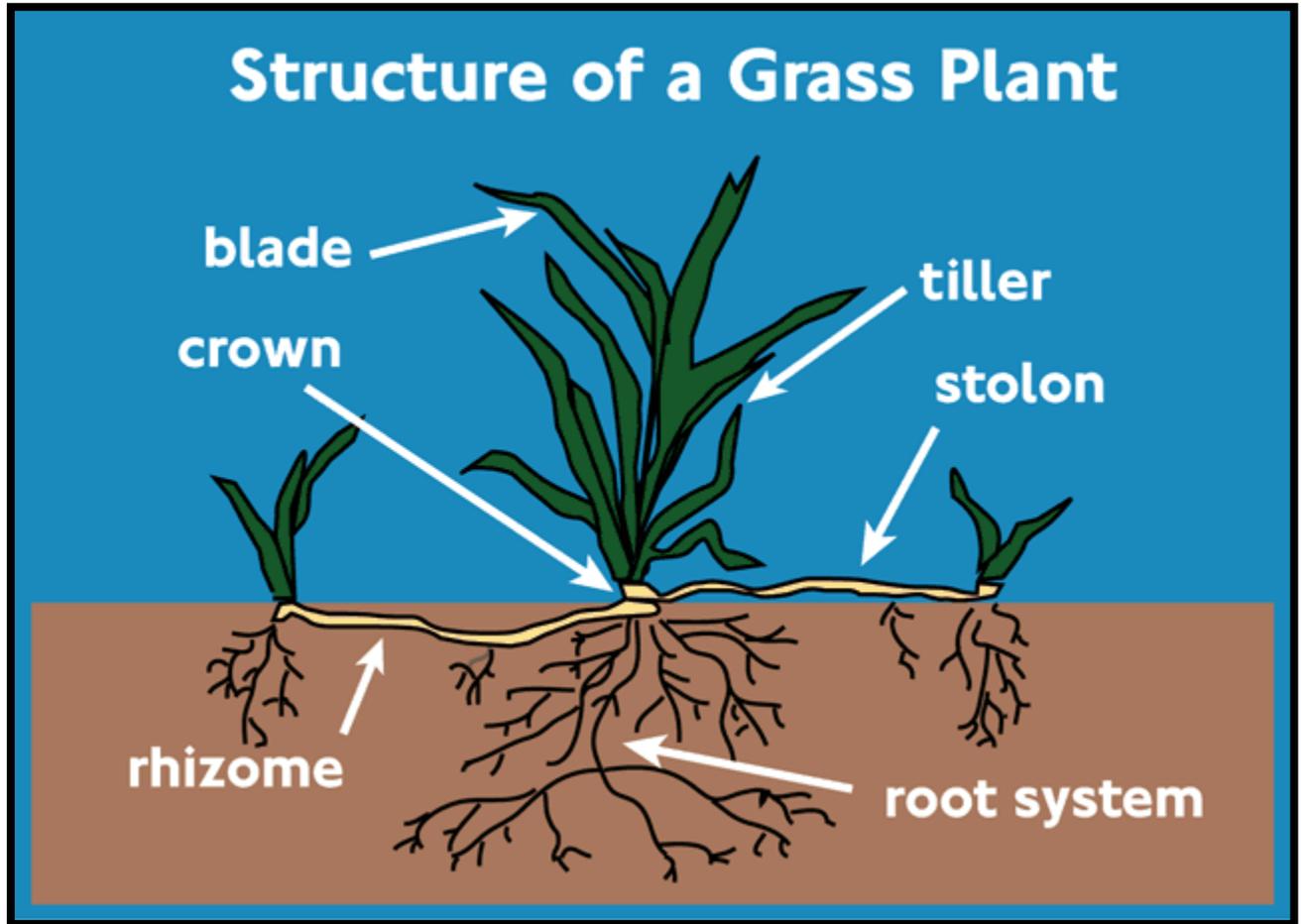
Second Look Science – Block 6SLS

The Science of Sport

Session 1

Resource pack

Structure of grass



Grass types

Cut out each grass 'strip' and get children to decide on three grass types that they think would suit a sports pitch and why. Only share the common grass seed mix content once children have made their decisions.



Perennial ryegrass

Durable
Drought hardy
Vibrant colour all year round



Fescue grasses

Soft texture
Tolerant of close-mowing



Smooth-stalked meadow grass

Self-repairs

	<p>Slender creeping red fescue grass</p>	<p>Shorter, slender and less vigorous creeping rhizomes</p> <p>Fine leaves</p>
	<p>Chewings fescue grass</p>	<p>Upright growth</p> <p>Thin leaves</p> <p>Drought resistant</p>
	<p>Brown top bent grass</p>	<p>Fine leaves</p>

Commonly used grass mixture for sports pitches in the UK:

- **60% Perennial ryegrass**
- **25% Smooth stalked meadow grass**
- **15% Creeping red fescue**

Important properties for sports & athletic field grass

- ***Dense, thick turf***
- ***Very hardy (able to withstand impact)***
- ***Can repair quickly***
- ***Suited to environment and climate***
- ***Spread easily***
- ***Withstand regular, close mowing***

Care for sports and athletic field grass

- **Fertilise, water and mow regularly**
- **Ensure seed mixtures are used to get the most coverage and for the longest period of time**
- **Rotate and rest fields between usage periods so grass can be repaired and recover**

Grass grading system

Research each grass online and grade it according to the following characteristics.

<i>Characteristic</i>	<i>Grading</i>
<i>Dense, thick turf</i>	<i>Very dense & thick – 3</i> <i>Mid-range density & thickness - 2</i> <i>Very fine - 1</i>
<i>Very hardy (able to withstand impact)</i>	<i>Very hardy - 3</i> <i>Hardy - 2</i> <i>Not hardy - 1</i>
<i>Can repair quickly</i>	<i>Self-repairs quickly - 3</i> <i>Self-repairs - 2</i> <i>Not self-repairing - 1</i>
<i>Spreads easily</i>	<i>Spreads quickly - 2</i> <i>Spreads slowly - 1</i>
<i>Withstand regular, close mowing</i>	<i>Withstands close, regular mowing - 2</i> <i>Cannot withstand close, regular mowing - 1</i>

Investigation questions

- How much water will you use to keep it moist?
- How often will you water?
- What time of day will you water?
- Will you feed the grass in any way?
- How will you measure growth?
- How often will you measure growth?
- Where will you keep your turf?

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Terrific turf record sheet

Groundskeepers _____

Date:		Date:	
Temperature:		Temperature:	
Weather: (sunlight, shade)		Weather: (sunlight, shade)	
Water: (ml)		Water: (ml)	
Other Lawn Care:		Other Lawn Care:	
Observations:		Observations:	

Judging guidance and turf report

- After a few weeks of grass maintenance come up with some agreed criteria to select the best grass (e.g. greenness, thickness of blades, number of blades).
- Take a look at the top three samples as selected by the class and look in detail at the care that they have been given. Get the groups responsible for this turf to present their records and decide what they have they done differently to make the grass so successful. Look at: watering (frequency and amounts); feeding (which feeds, frequency/amounts); location (light), length, etc.
- Consider which turf is terrible and think about the possible reasons why some samples have been less successful? Get successful and unsuccessful groups to sit together and share their data, encouraging them to draw conclusions from their findings.
- As a class make a list of 'do's and 'don'ts, based on the actual data collected and need to be specific where possible (e.g. water daily 200ml, cut to 1cm length).
- Now present your findings in an information report. Once you have completed your report, you could now share the findings from the experiment with your local football club, or city/town council. Give them an overview of the enquiry and the conclusions from it.