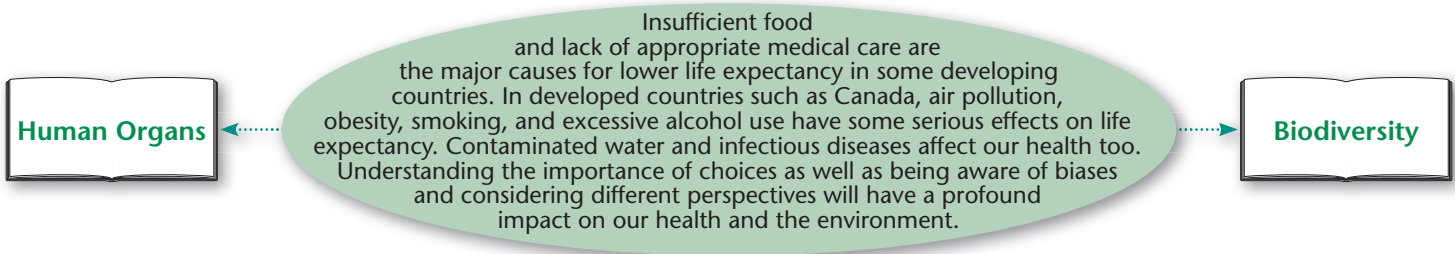
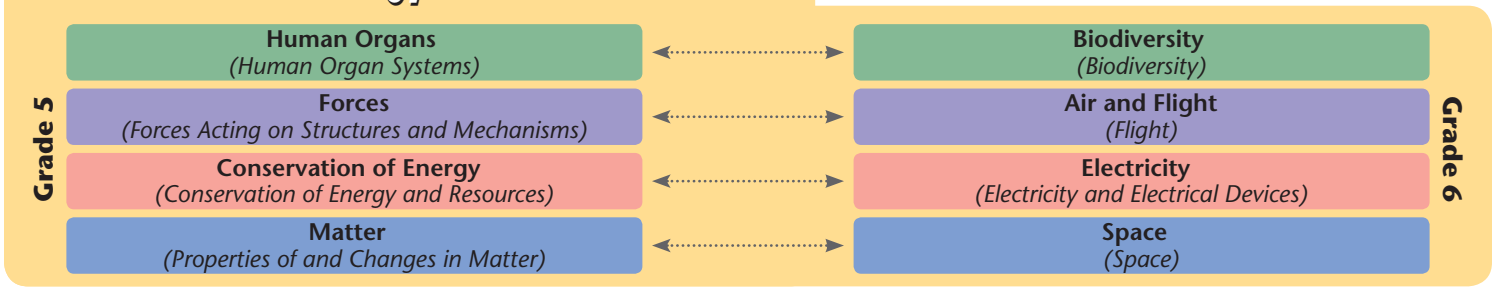


# Science & Technology Activities Resource

# Combined Grades 5 & 6



**Class Activities**

**Video**  
Species Survival (FOS 6-2, page 9)

**Big Ideas**  
 Upsetting biodiversity may alter our fresh water sources; and may allow some diseases to adapt to infect humans. This could alter the soil quality and eventually lead to the extinction of many living things on which our health depends.  
 6.1 Humans make choices that can have an impact on biodiversity. (OE 1)  
 5.1 Choices we make affect our organ systems and, in turn, our overall health. (OE 1, 3)

**Video**  
Take My Breath Away (FOS 5-1, page 3)

**Group Activities - Grade 5**

**Case Study**  
Take My Breath Away (FOS 5-1, page 4)

**Group Activities - Grade 6**

**Case Study**  
Species Survival (FOS 6-2, page 10)

**Class Activities**

**Tell Me More Articles**  
 Reading Article: The Air We Breathe  
 Literacy Strategy: Retell, Relate, Reflect (FOS 5-1, page 7)

**Group Activities - Grade 5**

**Big Ideas**  
 5.2 Organ systems are components of a larger system (the body) and as such, work together and affect one another. (OE 2, 3)  
 5.3 Organ structures are linked to their functions. (OE 2, 3)  
 5.4 Systems in the human body work together to meet our basic needs (OE 2, 3)

**STAR Activities**  
Human Organs: Investigation 1, 4, 5, 8, 9, 10

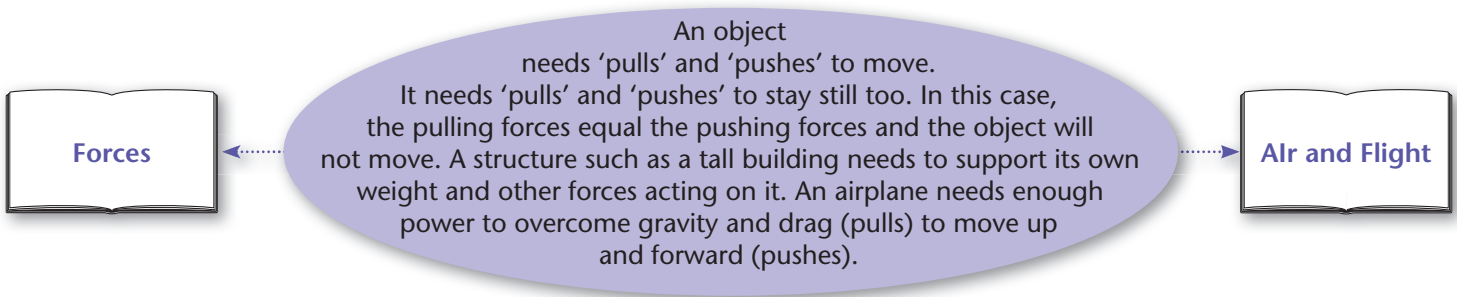
**Group Activities - Grade 6**

**Big Ideas**  
 6.2 Biodiversity includes diversity of individuals, species, and ecosystems. (E 2, 3)  
 6.3 Classification of components within a diverse system is a beginning point for understanding the interrelationships among the components. (OE 2, 3)  
 6.4 Because all living things are connected, maintaining diversity is critical to the health of the planet. (OE 1, 3)

**STAR Activities**  
Biodiversity: Investigation 1, 2, 4, 5, 6, 8, 9

**Class Activities**

**Tell Me More Articles**  
 Reading Article: Threats to Biodiversity  
 Literacy Strategy: Visualizing Information (FOS 6-1, page 6)



**Class Activities**

**Video**  
Talking Up A Storm (FOS 5-3, page 17)

**Big Ideas**  
5.1 Structures and mechanisms throughout our environment have forces that act on and within them. (OE 1, 3)  
5.2 Forces that result from natural phenomena have an effect on society and the environment. (OE 1, 3)

**Group Activities - Grade 5**

**Case Study**  
Extreme Weather (FOS 5-3 page 16)

**Group Activities - Grade 6**

**Big Ideas**  
*Forces can be damaging but all motion, such as flight, requires the work of forces.*  
6.1 Flight occurs when the characteristics of structures take advantage of certain properties of air. (OE 1, 2, 3)

**Case Study**  
Assessing Aviation (FOS 6-3 page 16)

**Class Activities**

**Tell Me More Articles**  
Reading Article: Tornado Alleys  
Literacy Strategy: KWL (FOS 5-3, page 19)

**Group Activities - Grade 5**

**Big Ideas**  
5.3 We can measure forces in order to determine how they affect structures and mechanisms. This information can be used to guide the design of new structures and mechanisms. (OE 1, 2)

**STAR Activities**  
Forces: Investigations 1, 2, 3, 4, 6, 7

**Group Activities - Grade 6**

**Big Ideas**  
6.2 Air has many properties that can be used for flight and for other purposes. (OE 1, 2, 3)

**STAR Activities**  
Air and Flight: Investigations 1, 2, 3, 5, 6, 7

**Class Activities**

**Video**  
Diversity of Modern Aviation (FOS 6-3, page 17)

**Conservation of Energy**

Many of our daily activities depend on electricity. Some of the primary sources of electricity are renewable and some are not. While technologies certainly improve the quality of our lives, excess use of energy will lead to a profound impact on the Earth and hence our future.

**Electricity**

### Class Activities



#### Video

Smart Meter (FOS 5-8, page 51)



#### Big Ideas

- 5.1 Choices about using energy and resources have both immediate and long-term impacts. (OE 1)
- 5.2 Conservation (reducing our use of energy and resources) is one way of reducing the impacts of using energy and resources. (OE 1)
- 6.1 Electrical energy plays a significant role in society, and its production has an impact on the environment. (OE 1)
- 6.2 Society must find ways to minimize the impact of energy production on the environment. (OE 1)



#### Video

Top 10 Tips (FOS 6-5, page 31)



#### Case Study

(Non-) Peak Experiences (FOS 6-5 page 32)



#### Tell Me More Articles

Reading Article: What You See and Don't See!!  
Literacy Strategy: Anticipation Guides (FOS 6-5, page 34)



#### Big Ideas

- 5.3 Energy sources are either renewable or non-renewable. (OE 3)
- 5.4 Energy can neither be created nor destroyed, but it can be transformed. (OE 2, 3)
- 6.3 Electrical energy can be transformed into other forms of energy. (OE 2, 3)
- 6.4 Other forms of energy can be transformed into electrical energy. (OE 2, 3)

### Group Activities - Grade 5



#### STAR Activities

Conservation of Energy: Investigations 2, 3, 5, 7, 9

### Group Activities - Grade 6



#### STAR Activities

Electricity: Investigations 1, 3, 4, 5, 6, 7

### Class Activities



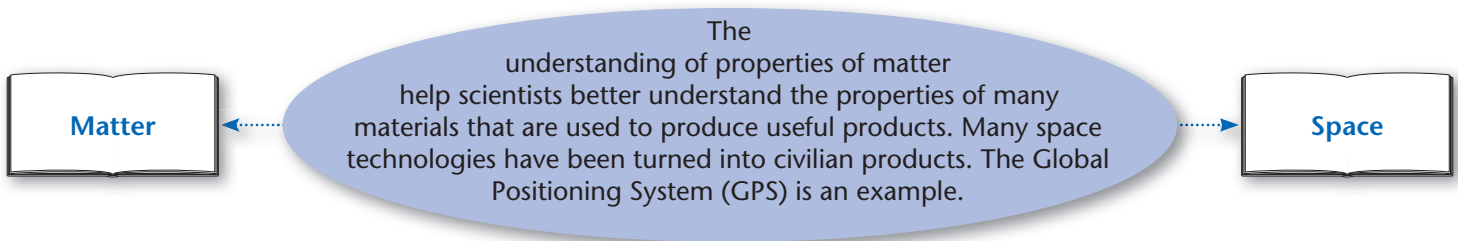
#### Video

How it Works – Hydroelectric Power (FOS 6-4, page 25)



#### Tell Me More Articles

Reading Article: Which Way does the Wind Blow?  
Literacy Strategy: Visualizing Information (FOS 5-7, page 48 )



### Class Activities



#### Video

Canada in Space (FOS 6-7, page 45)



#### Big Ideas

- 6.1 Earth is part of a large interrelated system. (OE 2, 3)
- 5.1 There are three states of matter. (OE 2, 3)
- 5.2 Matter that changes state is still the same matter. (OE 2, 3)

### Group Activities - Grade 5



#### Big Ideas

- 5.3 Physical change refers to the fact that a substance can be changed from one form to another. (OE 2, 3)
- 5.4 Chemical change implies the formation of a new substance. (OE 2, 3)
- 5.5 The properties of materials determine their use and may have an effect on society and the environment. (OE 1)



#### STAR Activities

Matter: Investigations 1, 2, 3, 4, 5, 7, 8

### Group Activities - Grade 6



#### Big Ideas

- 6.2 Technology and scientific advances that enable humans to study space affect our lives. (OE 1, 2)



#### STAR Activities

Space: Investigations 1, 2, 3, 4, 7, 10

### Class Activities



#### Video

*Rubber is a common material used in the manufacturing of products such as rubber tires. However, rubber is a material that is difficult to decompose. With the high number of vehicles on the roads, it is not hard to imagine the problems with used tires.*

Round and Black (FOS 5-6, page 45)



#### Case Study

The Good Consumer (FOS 5-6 page 37)



#### Tell Me More Articles

Reading Article: Duct Tape and Pasta  
Literacy Strategy: Mapping (FOS 5-5, page 34)



#### Video

Duct Tape Virtuoso (FOS 5-5, page 32)