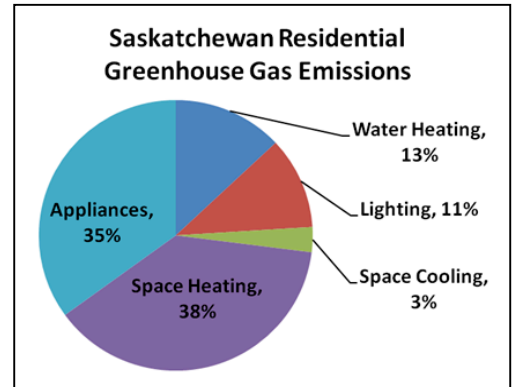




### MATH LESSON PLAN 3 ENERGY EFFICIENT HOMES—CREATING CIRCLE GRAPHS

1. According to **Natural Resources Canada data for 2008**, these are the Greenhouse Gas (GHG) emissions for Saskatchewan homes. Which areas would you concentrate on in planning a building retrofit? Why? List something you could do to reduce greenhouse gas emissions in each category.



2. Use the following **Natural Resources Canada** information on residential energy use to create a circle graph.

#### Saskatchewan Residential Energy Use

Space Cooling	1%
Space Heating	62%
Water Heating	20%
Appliances	13%
Lighting	4%

3. The following information from **SASKPOWER ANNUAL REPORT 2009**, represents the total electricity sales (GWh or GigaWatts x hours) in Saskatchewan for 2009. Create a circle graph using the categories and their percentages.

#### Total Electricity Sales (GWh)

Residential	2,865
Farm	1,338
Commercial	3,407
Oilfield	2,742
Industry	6,139
Reseller	1,274
Total Saskatchewan Electricity Sales	17,765



GOING FURTHER:

The following slides are from the City of Saskatoon's "Let's Talk Recycling" presentations September 2010. ([www.saskatoon.ca](http://www.saskatoon.ca) – search "let's talk recycling") Interpret and discuss the data on the circle graph.

# Understanding our Waste: Composition

- How did we estimate Saskatoon's residential solid waste composition?

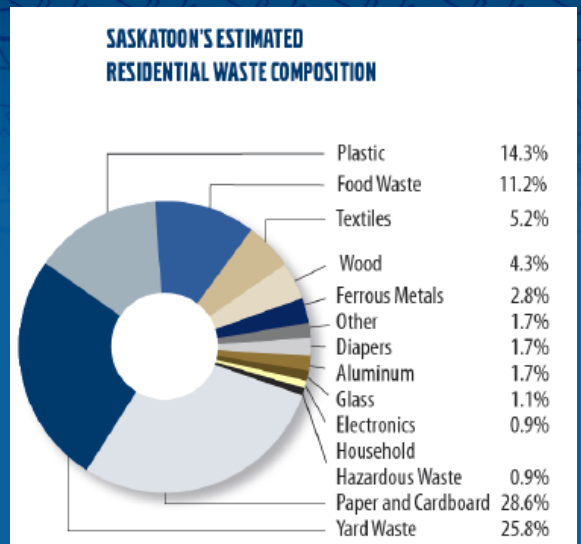


Based on 2006 values



# Understanding our Waste: Composition

- Residential solid waste generated in 2008: **84,000 tonnes**





## CURRICULUM CONNECTIONS

**Grade 7 Mathematics: Outcome SP7.2** Demonstrate an understanding of circle graphs.

**Grade 7 Science: Outcomes HT7.1** Assess the impact of past and current heating and cooling technologies related to food, clothing, and shelter on self, society, and the environment. **HT7.3** Investigate principles and applications of heat transfer via the processes of conduction, convection, and radiation.

**Grade 7 Social Studies: Outcomes: DR7.2** Appraise the impact of human habitation on the natural environment in Canada, and in a selection of Pacific Rim and northern circumpolar countries. **RW7.3** Assess the ecological stewardship of economies of Canada and the circumpolar and Pacific Rim countries.