

Duration: 180 minutes

MATERIALS

Protractor
Compass
Chart paper
Markers, pencil crayons

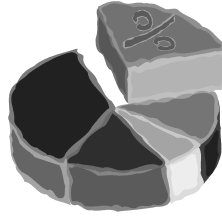
RESOURCES

Statistics Canada – The Daily Study: Workaholics and Time Perception

Blueprint For Life/Work Designs – The Quick Reference Guide

INSTRUCTIONAL METHODS

Anticipation Reading
Indirect Instruction
Interactive Instruction
Concept Mapping



LESSON OBJECTIVES

- ✓ Students will understand the concept of stress and its impact on mental and physical well-being (BP 3.2.2)
- ✓ Students will explore work, family, and leisure activities and acknowledge their impact on one's mental, emotional, physical and economic well-being (BP 3.2.6)
- ✓ Students will be able to identify common attributes of circle graphs such as title, label or legend, that the sum of central angles is 360° , and that the data is reported as a percent of the total, and the sum of the percents is equal to 100%
- ✓ Students will create and label a circle graph to display a set of data
- ✓ Students will be able to interpret a circle graph to answer questions

BACKGROUND INFORMATION

A recent study by Statistics Canada found that almost one-third (31%) of working Canadians identify themselves as workaholics. Sixty-five percent of workaholics worried that they do not spend enough time with family and friends. They were also more likely to report that the general state of their health was fair or poor, and that they had trouble sleeping. They were more likely than non-workaholics to feel rushed, trapped in a daily routine, and unable to accomplish what they set out to do at the beginning of the day.

The answer to sustaining a healthy lifestyle lies in striking a balance between work activities, and life activities. Everyone needs to work every day some (or go to school), and also to balance that with things like household chores, studying (or lifelong learning), physical activity, leisure activity, quiet-time (or spirituality), laughter and love (time with family and friends). Oh, and you can't forget to sleep!

Maintaining an appropriate work/life balance is something that everyone needs to work at throughout their lives, as changes and life events occur (graduating high school or post-secondary school, starting a first job, getting married or becoming a parent, owning your own home, and even in to retirement).

MOTIVATIONAL SET

Introduce students to the Statistics Canada study: [Workaholics and Time Perception](#), by having them make an anticipation guide outlining the major points of the study in their math journal. This study is available for download from the APEGS website www.apegs.sk.ca, click 'About Us', 'Youth Programs'.

Discuss why students think studies like this are done. Have students look at each of the major points and record what they think the study will report on each, in the anticipation section of the guide. Then have the students read the article and discuss their answers in groups. Did the study confirm their expectations? Were there any surprises? Have them complete the reaction section of the anticipation guide.

Anticipation Guide: Workaholics and Time Perception

Major Point	Anticipation <i>(What I think the study will report on this point)</i>	Reaction <i>(Was I right? How do I feel about the information?)</i>
Percentage of Canadians who identify themselves as workaholics		
General state of health for workaholics compared to non-workaholics		
Personal income and job satisfaction		
Job performance		

PROCEDURE / TIMELINE

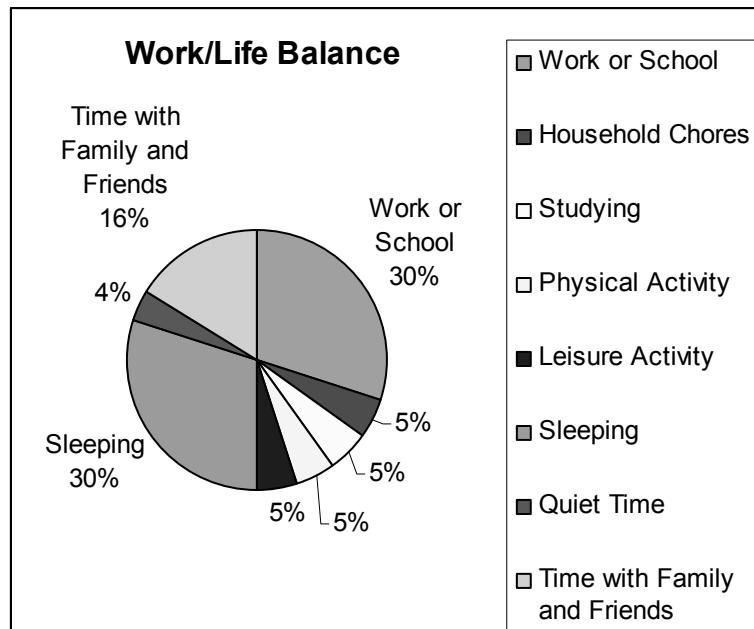
I. Concept Map: Work/Life Balance

1. Hand out chart paper and markers. Have students create a concept map in groups, with the central idea/concept: 'Work/Life Balance'.
2. Encourage students to branch smaller, related concepts from ones they have created. More specific concepts can also be branched off from the original categories, and so on.
3. Have students color in any concepts that they feel would help to relieve stress.
4. Once all charts are done, have the students post them around the classroom. Call students up to explain their concept map to the class.

Key Questions: What causes stress? How does stress affect the person? The family? How can stress be lessened?

II. Graphing Weekly Activities

1. Hand out or present on overhead the circle graph: 'Work/Life Balance'.



2. Generate a discussion.
 - i. Is this reasonable?
 - ii. What activities should be less/more?
 - iii. Given what you see on the circle graph: What could be causes of stress? What could be things that would relieve stress?
3. Discuss what you see as the physical make-up of the circle graph that is common to all circle graphs:
 - i. Title
 - ii. Key
 - iii. Colors
 - iv. Percentages
4. Explain to students that their assignment is to interview a family member, or a friend of the family, or keep track of their own week, and collect information about weekly activities. Interview subjects can estimate weekly percentages. Record the percentages that interview subjects report, in the eight categories used in the previous example. (*Extension: motivated/gifted students can record hours as the week progresses and come up with their own percentages.*)
 - i. Ask students what the sum of the percents should equal? (100%)
 - ii. Remind students that this activity is for learning about statistics and work/life balance, and that no student is to judge another's information.

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5. Using the eight categories and percentages recorded during the interview, students will construct a circle graph.
 - i. Convert percentages to decimal. (e.g. $30\% = 0.30$)
 - ii. Multiply the decimal number by 360° to determine the size of the 'pie piece'. (e.g. $0.30 \times 360^\circ = 108^\circ$)
 - iii. Draw a circle with a compass.
 - iv. Using the answer from ii, draw the corresponding 'pie piece' of the circle using a protractor.
 - v. Repeat for each of the eight categories.
 - vi. Color in each 'pie piece' using a different color, and indicate the corresponding percentage.
 - vii. Make a title and legend for the circle graph.
 6. Have students convert percentages in the circle graph, to the number of weekly hours spent on each activity for the eight categories. (e.g. $24 \text{ hours per day} \times 7 \text{ days per week} = 168 \text{ hours per week}$; $30\% = 0.30$; $0.30 \times 168 \text{ hours} = 50.4 \text{ hours}$)

DEBRIEF

1. Pose the questions: Based on what you have learned about work/life balance, are there any activities in your life that you will spend more/less time on? What changes will you make, and why?
2. Are there areas of your life where you are feeling stress? What could you do to help relieve stress in these areas?

ASSESSMENT / INDICATORS

1. A simple rubric may be prepared ahead of time with the students to assess the circle graph assignment.
2. Again, the indicators that the teacher will be looking for are an understanding by the students of the following items:
 - a. The students understand the concept of stress and its impact on mental and physical well-being.
 - b. The students understand the importance of work, family and leisure activities to mental, emotional, physical and economic well-being.
 - c. The students are able to identify what causes stress on one's own mental and physical well-being.

This lesson plan is available for download at www.apegs.sk.ca (click "About Us", "Youth Programs").