

## High-Oleic Oil

# Food Science and High-Oleic Oil E-learning Notes

Name \_\_\_\_\_ Date \_\_\_\_\_

### Review:

1. What is the difference between a polar and non-polar molecule?
2. How can you determine the shape of a molecule by its chemical formula?

### Essential question:

How does the shape of a molecule affect its function?

3. Draw the shape of a saturated fatty acid and the shape of an unsaturated fatty acid.

4.

	Saturated	Mono-unsaturated	Poly-unsaturated	Omega 3	Trans Fats
Solid/liquid at room temperature					
Bonds (cis/trans)/shape					
Likely to break down during frying					
Heart healthy					

5. Identify what type of fatty acid is described by the following “names” and where is the double bond, if present

a. C18:2n6

## High-Oleic Oil

- b. C12:0
- c. C15:1n6
- d. C18:1n9 (oleic acid)

6. What is the difference between a cis bond and a trans bond?

7. What is the function of hydrogenating a fatty acid?

8. What are the characteristics of an ideal oil for food?

9. Study the table below. a) Circle the **two most heat resistant** oils. b) How do these compare to other vegetable oils in terms of desirable healthy characteristics?

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10. What are the benefits of high oleic soybean oil?

11. Write three ideas you have for an experiment that will allow you to test the claims of high oleic oils?