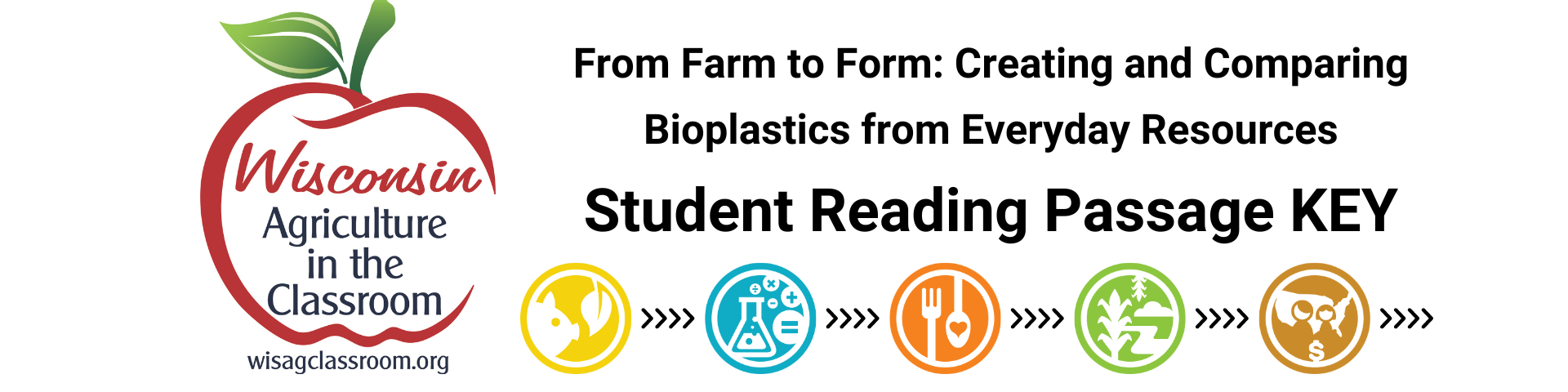
**From Farm to Form Student Reading Passage**

Bioplastics are a type of plastic that are made from plants instead of oil [3]. One plant that can be used to make bioplastics is soybeans [1]. Soybeans are a type of crop that is grown all over the world [1]. Most of the soybean is used to make oil, but there is also a lot of protein in soybeans [1]. The protein from soybeans can be used to make bioplastics [1].

To make bioplastics from soy protein, scientists use a process called cross-linking [1]. Cross-linking helps to make the bioplastics stable in water and gives them strength [1]. In fact, the bending strength of the bioplastics made from soy protein can be as strong as polyethylene, which is a type of plastic made from oil [1]. The bioplastics made from soy protein are also biodegradable, which means they can break down over time [1]. This makes them a good alternative to traditional plastics that can take hundreds of years to break down [1].

There are many potential uses for bioplastics made from soybeans [1]. They can be used in agriculture, as well as in making industrial parts and disposable items [1]. Bioplastics made from soybeans are also being explored as a replacement for plastic in packaging and single-use products [2]. They can even be used in 3D printing [2]. Using bioplastics made from soybeans can help reduce our reliance on petroleum-based plastics and be better for the environment [3].

In conclusion, bioplastics made from soybeans are a sustainable alternative to traditional plastics [3]. They are made from the protein in soybeans and can be as strong as plastics made from oil [1]. Bioplastics made from soybeans are also biodegradable, meaning they can break down over time [1]. They have many potential uses in agriculture, industry, and everyday products [1]. Using bioplastics made from soybeans can help us reduce our impact on the environment and create a more sustainable future [3].

[1] Soybean bioplastics and global ethics. - The SeaCleaners

https://www.theseacleaners.org/scientific%2520watch/soybean-bioplastics-and-global-ethics/

[2] Compostable and Biodegradable Soy-Based Plastics (RFT-597)

https://www.ndsuresearchfoundation.org/rft597

[3] Opportunities abound for soy bioplastics - Discoveracs.org

https://connect.discoveracs.org/UnitedSoybean\_biodegradable\_plastics

[4] Development of bio based plastic materials for packaging from ...

https://ui.adsabs.harvard.edu/abs/2017AIPC.1885b0230M/abstract

[5] A bioplastic derived from soya protein which can absorb up to 40 ...

https://phys.org/news/2017-06-bioplastic-derived-soya-protein-absorb.html

[6] Preparation of bioplastic using soy protein - PubMed

https://pubmed.ncbi.nlm.nih.gov/32035156/

**Multiple Choice Questions**

1.What are bioplastics made from?

A) Oil

B) Plants

**C) Soy protein**

D) Polyethylene

2. What is one advantage of using bioplastics made from soybeans?

A) They are stronger than traditional plastics.

B) They can be used in 3D printing.

**C) They are biodegradable.**

D) They are made from oil.

3. Why are bioplastics made from soybeans considered a sustainable alternative to traditional plastics?

A) They are cheaper to produce.

B) They can be used in agriculture.

**C) They are made from plants instead of oil.**

D) They have many potential uses.

**Short Answer Questions**

1. What are bioplastics and how are they different from traditional plastics?

**Answer:**

***Bioplastics are a type of plastic made from plants instead of oil. They are different from traditional plastics because they are made from renewable resources and can break down over time.***

2. How do scientists make bioplastics from soy protein?

**Answer:**

***Scientists use a process called cross-linking to make bioplastics from soy protein. Cross-linking helps to make the bioplastics stable in water and gives them strength.***

3. What are some potential uses for bioplastics made from soybeans?

**Answer:**

***Bioplastics made from soybeans can be used in agriculture, making industrial parts, disposable items, packaging, single-use products, and even 3D printing.***

**Reflection Questions**

1. How do you think bioplastics made from soybeans could be used in your everyday life?

2. What are some ways that using bioplastics made from soybeans could help protect the environment?

3. Do you think it is important to reduce our reliance on petroleum-based plastics? Why or why not?