



The Process of Producing

Middle School Food and Agricultural Literacy Curriculum

Precepts

- O. Flexibility and adaptability
- O2. Manage changes

National Standards

- CS.03.03.02.a. Select the appropriate process to initiate effective change for a given situation.
- CS.01.03.01.b. Utilize visioning skills to develop a plan.
- FPP.01.02.01.a. Explain the purposes of organizations that are part of or regulate the food products and processing industry.
- FPP.02.03.01.a. Explain techniques and procedures for the safe handling of food products.
- NL-ENG.K-12.5 – Communication Strategies
- NL-ENG.K-12.12 – Applying Language Skills
- NS.5-8.3 – Life Science
- NSS-EC.5-8.7 – Markets and Market Prices
- NSS-EC.5-8.8 – Supply and Demand

Student Learning Objectives

- As a result of this **unit** the student will...
- Examine the components of the Food and Agricultural Literacy: Apply mathematics and science concepts.
- As a result of this **lesson** the student will...
- Discuss consumer **production** and processing issues related to food science.

Content Outline

Objective 1: Discuss consumer **production** and processing issues related to food science

- I. **Discuss consumer production and processing issues related to food science**
 - A. **Production**
 - 1. **Production** is the creation of value; producing articles of value.
 - 2. **Production** of food and fiber

Time

Instruction time for this lesson: 45 minutes.

Resources

Production. (n.d.) In Ask.com, www.dictionary.reference.com/browse/production. — Manufacturing. (n.d.) In Ask.com, www.dictionary.reference.com/browse/manufacturing. — Marketing. (n.d.) In Ask.com, www.dictionary.reference.com/browse/marketing. — Service. (n.d.) In Ask.com, www.dictionary.reference.com/browse/service. — Schneiderheinze, R., & Wood, C. (1997). *Agribusiness: Sales, Marketing & Management – Student Reference*. Columbia, MO: Instructional Materials Laboratory. — Ricketts, C., & Rawlins, O. (2001). *Introduction to Agribusiness*. New York: Delmar Thomson Learning.

Tools, Equipment, and Supplies

MS.IAS.8.1.AS.A – one per teacher
MS.IAS.8.1.AS.B – one per teacher
MS.IAS.8.1.AS.C – one per teacher
MS.IAS.8.1.AS.D – one per teacher
MS.IAS.8.1.AS.E – one per teacher
MS.IAS.8.1.AS.F – one per student
MS.IAS.8.1.TM.A – one per teacher
MS.IAS.8.1.ASSESS.A – one per student
Overhead and transparency

Key Terms

The following terms are presented in this lesson and appear in **bold italics**:

Production

Manufacturing

Marketing

Service

B. **Manufacturing**

1. **Manufacturing** is changing a product into a useful form.
2. Provides inputs for **production** sector
 - a. fertilizer, chemicals, feed, machinery, processing plants
3. Processes food and fiber for sale to consumer
 - a. wholesalers and retailers, food brokers, groceries, fast food, restaurants



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C. Marketing

1. **Marketing** is preparing a product for sale or trade.
2. Transports and sells outputs of **manufacturing** sector to producers and consumers
 - a. transportation to retailers and wholesalers, sales of goods produced in **manufacturing** sector, agriculture businesses

D. Service

1. **Service** is providing a helpful act or accommodation for something.
2. Provides financing, **service** and support for **production** sector
 - a. credit agencies, insurance companies
 - b. price supports, product research

Interest Approach

Prior to class, print **MS.IAS.8.1.AS.A – MS.IAS.8.1.AS.E**. Have these five items placed in the four corners of the room and the last one in the center of the room. As students enter the room, give them a number. After the bell and announcements, gather students in their groups based upon the number they were given. Direct groups to four corners of the room with one group finding its home in the center of the room. As directions are given, point out the correct corner for the groups to make their home.

As we entered the classroom today, we were given a number. When I say GO all 1's gather in this corner, the 2's across the room in this corner, the 3's in the corner over here, and the 4's in the last corner. All 5's will gather in the center of the room. Make this happen in 20 seconds. GO!

Now that students are in their groups, direct their attention to the activity sheet that is hung in their area. Allow students three minutes to answer the following question about the two pictures on their activity sheet: How does the product on the left become the grocery store product on the right? What people are involved in this process? What steps are involved in this process?

When we hear ACTION, let's direct our attention to the activity sheet found in your group's area. Take three minutes to answer the following questions: How does the product on the left get to the grocery store product on the right? What people are involved in this process? What steps are involved in this process?

Be prepared to share your thoughts and ideas with the class at the conclusion of three minutes. What questions do you have? ACTION!

Have groups assign one student to be the spokesperson for their group. This individual will share with the class their activity sheet and answers to the questions above.

As we finish wrapping up our thoughts and ideas, silently turn your eyes and ears toward my voice. In just a moment we will begin sharing our activity sheets with the class. The person with the longest hair in your group will be the spokesperson. As your group is called on, share with us your activity sheet, how the product on the left becomes the grocery store product on the right, what people are involved in the process, and what steps are involved in the process. 1's you're up first! Let's hear your great ideas.

Complete this process for the remaining four groups. After all groups have completed this process, find commonalities between the processes these products go through from farm to grocery store.

We certainly had some great ideas. What were a few commonalities we found between all products we discussed thus far?

Responses may include: all needed to be transported to the grocery store, needed to be changed into a different state, needed to be processed before we could eat the product, etc.

That's correct; all of these products had to go through a number of steps before they ended up in the grocery store. Although all products do not go through the exact same steps, they had to go through a particular process in order to get from a raw commodity to a usable and salable product. Today we are going to take a journey through the agricultural sectors, or the processes raw products go through in order to find their way to the grocery store shelf. As we prepare for this journey, continue to consider your group's product and fill in the processes your group was lacking. By the end of hour today, our groups will have their complete process from left to right and answer the question: "How does this product get to the grocery store shelf?"



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Summary of Content and Teaching Strategies

Objective 1. Discuss consumer **production** and processing issues related to food science

There are four main sectors of the agriculture industry. These sectors include **production**, **manufacturing**, **marketing**, and **service**. Today we will travel through these four sectors, establish their role in the agriculture produces, and note concerns that may ultimately affect us as consumers.

Divide students into four equal groups, one for each sector of the agriculture industry. Students may choose three other people to be in their group. Once they have come together, have each student number off 1 through 4. Next, instruct all 1's to a corner, all 2's to another, 3's to another and 4's to the last corner. These will be their groups for the next activity.

When I say GO, take the next 30 seconds to find three other students, circle up, and assign each member a number 1 through 4. GO! Next, all the 1's over here, 2's in this corner, 3's in the corner across the room, and all 4's to the final corner. Today each corner group will become experts in one sector of the agriculture industry. 1's will be our **production** sector, 2's the **manufacturing** sector, 3's are **marketing**, and 4's are the **service** sector. Let's first decipher what each of these sectors entails.

Give students **MS.IAS.8.1.AS.F** to record the definition of all four sectors. Reveal **MS.IAS.8.1.TM.A** to assist students in capturing these definitions.

Coming around to you is an activity sheet with the definitions of these four sectors.

Production –the creation of value; producing articles of value

Manufacturing –changing a product into a useful form

Marketing –preparing a product for sale or trade

Service –providing a helpful act or accommodation for something.

After students have recorded the definitions of these sectors, assign each expert group the opportunity to brainstorm examples of each sector. Ideas may include: (Students may need more guidance here; some of these are not areas that students have a lot of experience with.)

Production – producing food and fiber, farmer

Manufacturing – fertilizer, chemicals, feed, machinery, processing plants, wholesalers, retailers, etc.

Marketing – trucking companies to retailers and wholesalers, agriculture businesses, price brokers, advertising agencies, food brokers, groceries, fast food industry, restaurants etc.

Service – credit agencies, insurance companies, price supports, product researchers, etc.

Now that we've captured the definition of the agriculture industry sectors, let's become experts in our specific areas. Take the next five minutes to consider specific examples of people, businesses, or companies that may fall into your specific sector. Feel free to provide specific names of companies and/or businesses or just general types. What can be clarified? BRAINSTORM!

At the conclusion of five minutes, facilitate the sharing of these brainstorming ideas. The person with the bluest eyes in each group will be presenting their brainstorming ideas to the class. As this is happening, the rest of the class will capture at least three specific examples of each sector on **MS.IAS.8.1.AS.F**.

We're anxious to hear those great ideas. As each sector is called, send the person with the darkest eyes to the front of the room. This group member will share for us the specific examples your group just brainstormed. During this time, the rest of us will be capturing at least three specific examples for each sector on our activity sheets. What questions do we have? Great! Let's hear from group 1, the **production** sector.

Continue this process for the next three sectors. Following this process, give groups five minutes to discuss possible concerns associated with their sector and how those concerns affect them as consumers. Possible ideas may include:

Production – weather, price, supply and demand, labor, availability of supplies, etc.

Manufacturing – labor, supply and demand, fertilizer and other chemical costs, etc.



Lesson Number: MS.IAS.8.1

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Marketing – demand for a particular product, labor needs, technology requirements/needs, health trends, consumer trends, etc.

Service – availability of government programs, farmer support, interest rates, land/livestock availability

Thanks for sharing your brainstorming ideas! We have a great list for each sector of the agriculture industry. Now, let's dive into this a little further. Many of us may eventually work in one of these sectors of the agriculture industry. It is likely that we will experience changes of some sort during our career in the agriculture industry. In fact, individuals currently in the industry are experiencing various changes as we speak. One way we can adapt to changes and manage their effects is by preparing for them and anticipating what concerns may come about.

Let's pretend for a moment that we are each working in our specific agriculture sector. We all play a very important role in that sector, and we need to take a look at some possible concerns that may come about in order to be the most effective at managing change within the sector. Take the next five minutes to brainstorm with your group some possible concerns related to your group's specific agriculture sector in relation to consumers. In these five minutes, groups should come up with at least four different concerns for their sector. How much time do we have? How many concerns must we brainstorm? Great! Let's BRAINSTORM!

At the conclusion of five minutes, bring the class back together. Knowing that each group should have a minimum of four concerns, direct them to use the *Mother Goose e-Moment®* to create a rhyme about their sector of the agriculture industry and the concerns their group just finished brainstorming. Students will choose a nursery rhyme and re-write the words with newly learned content. Groups will receive ten minutes to create this rhyme and prepare to present it to the class.

Now that we each have four concerns related to our sector of the agriculture industry, let's get creative with how we share these with the class. When I say RHYME, groups will have ten minutes to create a Mother Goose rhyme about the concerns related to each sector of the agriculture industry. Groups may want to begin with a favorite Mother Goose nursery rhyme and simply change the words to adapt to the concerns the group has to share. At the conclusion of ten minutes, each group will share their rhyme with the class.

What questions are there? RHYME!

After ten minutes, select one group at a time to share their nursery rhyme. As students listen to the rhyme, they will continue to complete **MS.IAS.8.1.AS.F** by recording at least two of the concerns noted in the nursery rhyme.

Let's wrap up those rhymes in 5 – 4 – 3 – 2 – 1. As each group is called to the front, share your sector's nursery rhyme with the class. Class, as we are listening to the group's rhymes, we will be recording at least two of these concerns on our activity sheet. **Production** sector – let's hear that rhyme!

Complete this process for the remaining sectors of the agriculture industry.

Wow, what creativity! Nice work on those rhymes!

Review/Summary

Use the Hieroglyphics e-Moment to help students collect their thoughts about the four sectors of the agriculture industry.

What a journey we have been on today. We have identified the four sectors of the agriculture industry, defined them, brainstormed examples, and then became aware of consumer issues related to those sectors. To ensure that these are locked in our minds, take the next two minutes and 30 seconds to collect your thoughts on the four individual sectors and draw a symbol that personally represents for you the meanings of each of the sectors. There is room on our activity sheets to put these symbols to the left of each sector. Begin your thought collection now!



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Application

Extended classroom activity:

Select a specific agricultural and/or consumer product. Research that product and chart the process from the **production** sector to the **marketing** sector. The final charted project should include specific names of people and/or agricultural businesses that are directly related with the path of this agriculture product.

FFA activity:

Conduct tours for agriculture businesses involved with each sector of the agriculture industry.

SAE activity:

Interview individuals working in each sector of the agriculture industry. Prepare a report on each interview.

Evaluation

MS.IAS.8.1.ASSESS.A

Answers to Evaluation

1. Production

Examples – producing food and fiber, farmer

Concerns – weather, price, supply and demand, labor, availability of supplies

2. Manufacturing:

Examples – fertilizer, chemicals, feed, machinery, processing plants, wholesalers, retailers

Concerns – labor, supply and demand, fertilizer and other chemical costs

3. Marketing

Examples – trucking companies to retailers and wholesalers, agriculture businesses, price brokers, advertising agencies, food brokers, groceries, fast food industry, restaurants

Concerns – demand for a particular product, labor needs, technology requirements/needs, health trends, consumer trends

4. Service

Examples – credit agencies, insurance companies, price supports, product researchers

Concerns – availability of government programs, farmer support, interest rates, /livestock availability



Name _____

Directions:

- Identify the four sectors of the agriculture industry.
- Provide two specific examples for each sector.
- List one concern associated with each sector.

Sector 1 _____

Examples: _____

Concerns: _____

Sector 2 _____

Examples: _____

Concerns: _____

Sector 3 _____

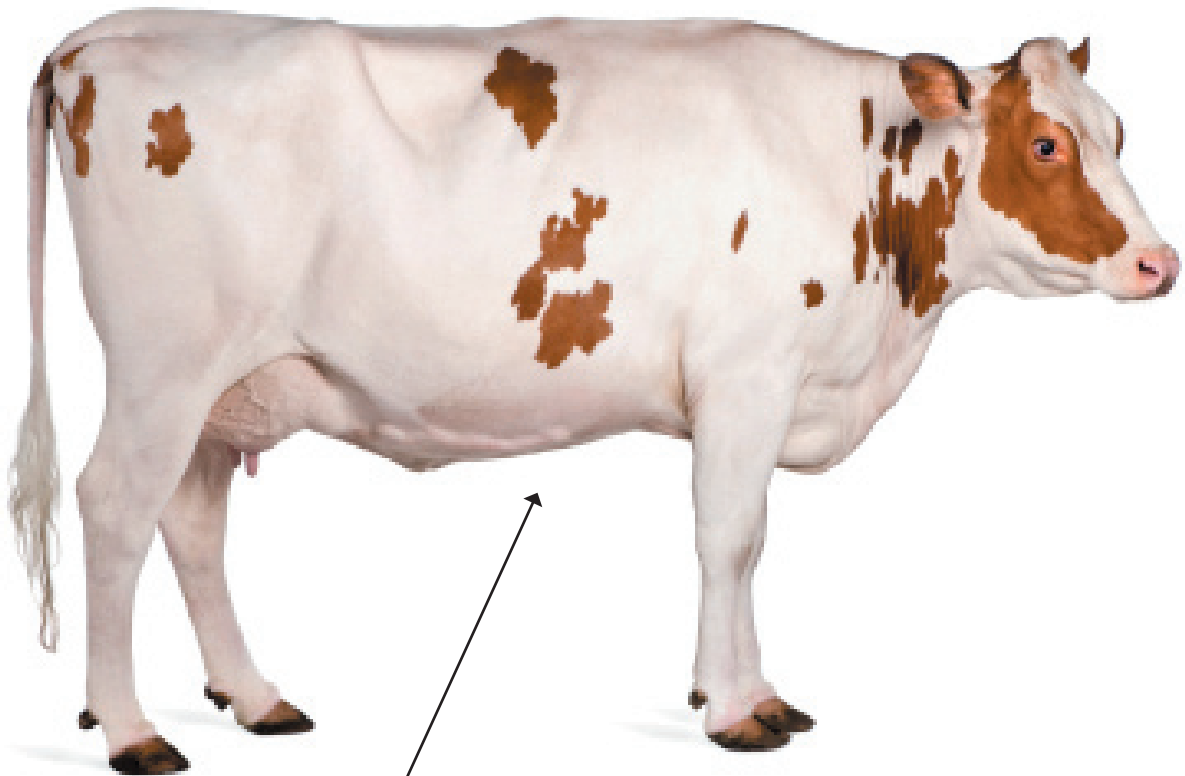
Examples: _____

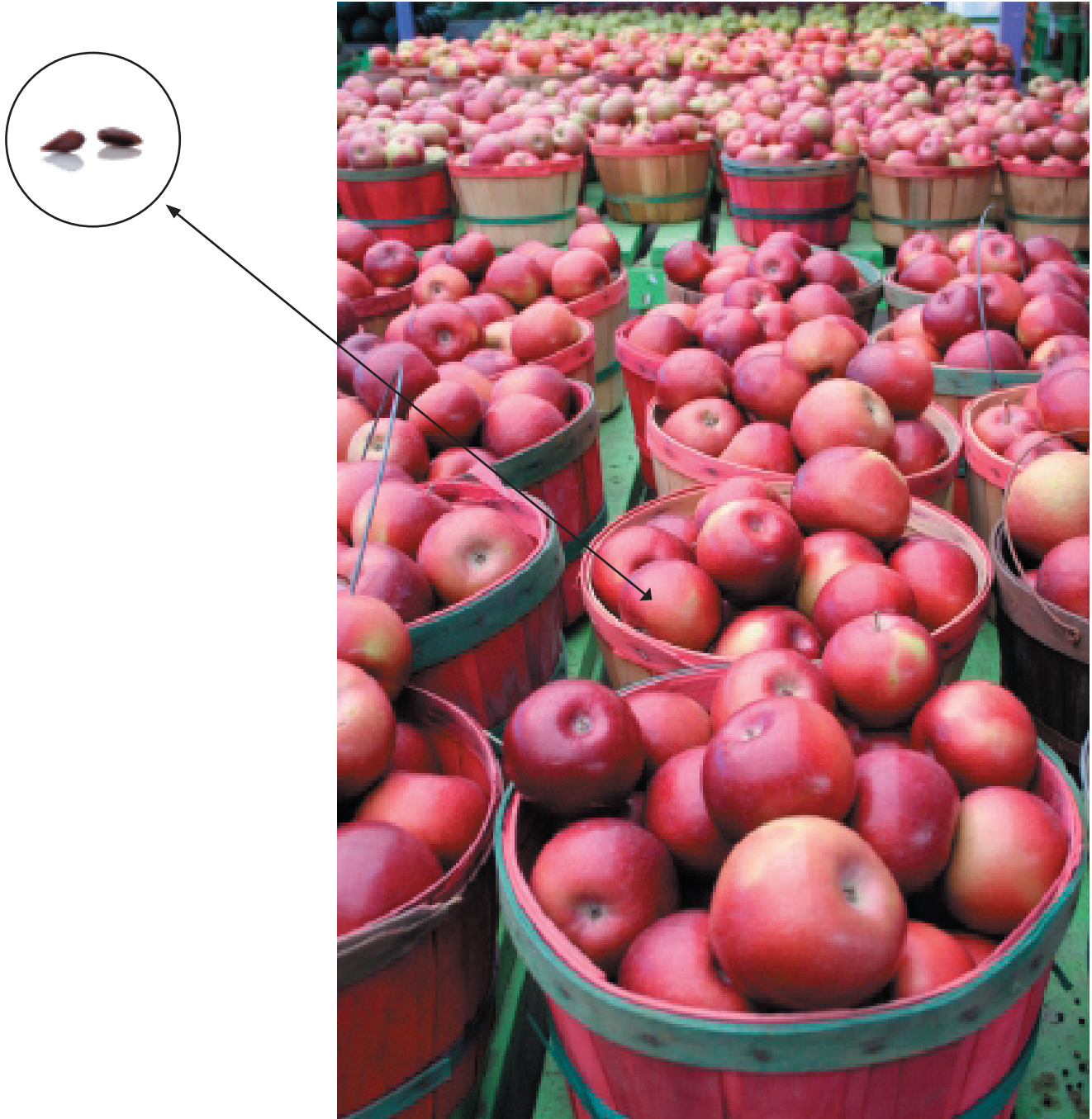
Concerns: _____

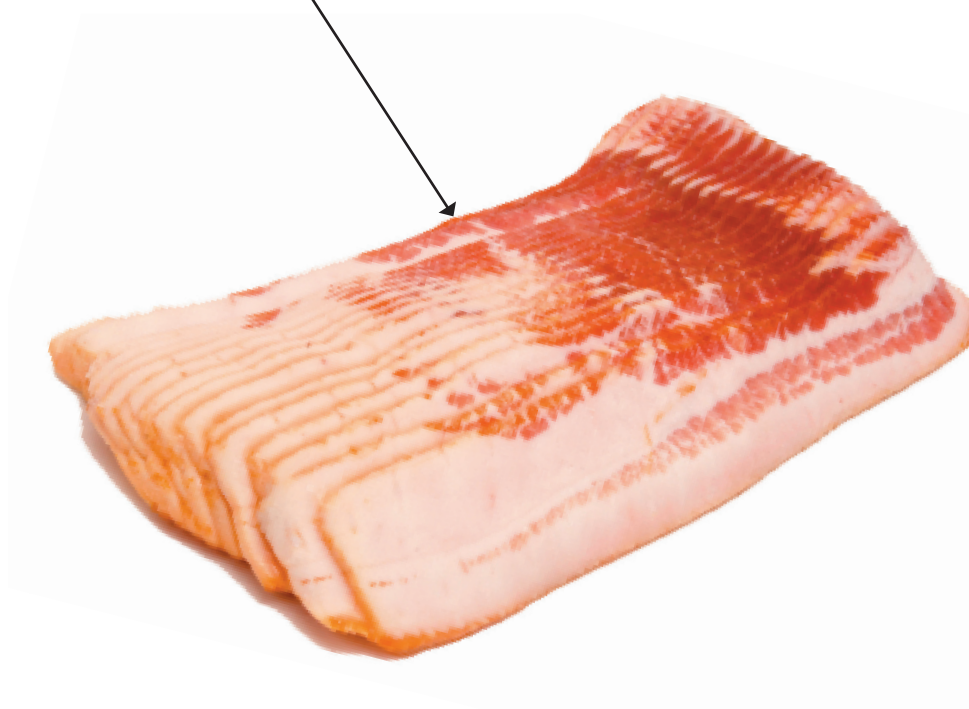
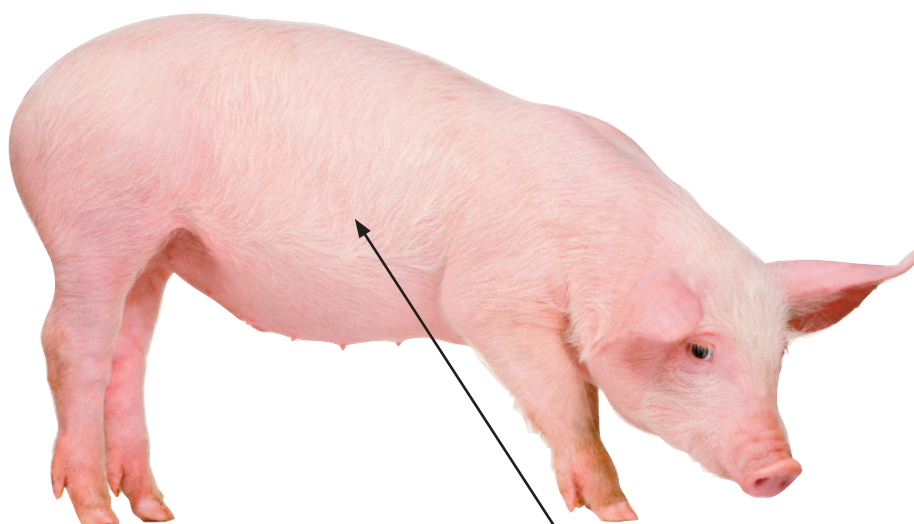
Sector 4 _____

Examples: _____

Concerns: _____









MS.IAS.8.1.AS.D







Agriculture Industry Sectors

Name _____

Production

Definition: _____

Examples: _____

Concerns: _____

Manufacturing

Definition: _____

Examples: _____

Concerns: _____

Marketing

Definition: _____

Examples: _____

Concerns: _____

Service

Definition: _____

Examples: _____

Concerns: _____



Production:

Production is the creation of value;
producing articles of value

Manufacturing:

Manufacturing is changing a
product into a useful form

Marketing:

Marketing is preparing a product
for sale or trade

Service:

Service is providing a helpful act or
accommodation for something