

“What is the outside of the egg called?” *The shell.*

“What is the colour of the shell?” *White colour.*

“If you pass your finger over the shell how does it feel?”
It feels smooth.

“What is the outside of the shell called?” *Its surface.*

“Is the surface flat like the table?” *No, it is bent or curved.*

“When I put the egg in the water it sank to the bottom; what does this tell me about the egg?” *It is heavy.*

“Now that the egg is boiled, I tap the shell with a spoon; what has happened to the shell?” *It is broken.*

“What do you say about the shell because it broke easily?”
It is brittle.

“Look at these small pieces; what can you say about the thickness of the shell?” *It is thin.*

“Just inside the shell you see something else. I will take a piece off. What is it?” *The skin.*

“What do you see about the skin?” *It is thin. It is white.*

“Feel it.” *It feels soft.*

“Now I have taken off the shell and the skin. What comes next?” *The white.*

“Why do we call it white?” *Because it has a white colour.*

“I remove the white. What comes next?” *The yellow—the yolk.*

“What colour has the yolk?” *Yellow colour. Orange colour.*

“I now break the raw egg. You will see the white and the yellow run out into the plate. I put a little of the white on this sheet of paper, press another sheet on the top and dry over the lamp. You see the papers are stuck together. Now what else can you say about the white of egg?” *It is sticky.*

As a further exercise the children may be asked to tell all they can about an egg without any assistance; in other words, they should be encouraged to talk about it.

LESSON XVIII.

A CABBAGE.

A COUPLE of cabbages, one of which may be of the purple kind used for pickling, and a few green leaves of different kinds should lie on the table.*

The teacher may commence this lesson by comparing the two cabbages as to their colour, and the cabbages again with the leaves. Advantage may be taken of the introduction of green and purple colours to test the memory of the children on the composition of these colours.

In the next place the teacher may remove the leaves one by one, at the same time directing the attention of the children to the way in which they are placed one over the other, to the manner in which the leaves are fixed to the stalk, and to the change in the colour of the leaves as we get nearer the middle.

Thirdly, a comparison should be made between the cabbage-leaves and other leaves as to *size, shape, hardness*, and the ease with which the blades are *torn*, as to the comparatively thick, soft, and juicy leaf-stalk of the one, and the thin harder stalk of the other.

Fourthly, the stalk of the cabbage may be cut across, and the children may be led to note the circular shape of the section, and the difference in hardness between the external and internal portions of the stalk.

The use of the stalk to support the plant, and of the plant itself for food when boiled, may be elicited from the children.

* If a cabbage showing its flower or seed-stalk can be obtained, the lesson can be made more complete.

LESSON XIX.

A COCOA-NUT.

A COCOA-NUT in its natural state—viz. with the fibrous outer husk adhering—a hammer, a penknife, and a cup or glass, will be all that is necessary for this lesson.

Introduce by telling the children that this lesson is to be about a large nut, called a cocoa-nut, and that cocoa-nuts grow in hot countries very far away from where we live.

Show the cocoa-nut, and invite the children to comment on its different parts as it is taken to pieces.

The outside rind is *thin* and *smooth*.

Then follows a thick *husk*, consisting of threads matted together.

Experiments will show that these threads are *flexible* and *tough*.

Remove the husk. The shell is *shown* to be *rough* and *hard*, and in *shape* somewhat like an egg.

The three black scars are now pointed out, one of which is shown to be *soft* by cutting through with a penknife.

The "milk" is next poured into a glass and the children are invited to *taste* it.

The shell is broken with a hammer. It is shown to be thick and strong, and the kernel to be fixed like a thick coating on the inside of the shell. A knife will demonstrate that the kernel is soft, and assist in its division into small pieces for tasting.

LESSON XX.

GLASS.

ANY specimens of glass or of glass articles will be useful in this lesson.

The introduction to this lesson may be a short recapitulation of Lesson XIII. Experiments may then be made with pieces of glass to show that it is not only *transparent*, but *smooth*, *hard*, and *brittle*.

The children may next be assisted in telling about some of the uses to which glass is put. Questions like the following, for instance, may be asked:—

"How do we get the light in this room?" *Through the windows.*

"What part of the window does the light come through?" *The glass.*

"Tell me some other use of the glass in the window?" *We can see through it.*

"But a hole in the wall would let the light in, and we could also see through it. Would a hole do as well as the glass window?" *No.*

"Why not?" *It would let in the rain and the cold wind.*

"Then, whilst the window lets in the light, what does it keep out?" *The wind and rain.*

Other uses of glass may be similarly dealt with.