

THE BIBLE VS. EVOLUTION

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LESSON 6. COMMON MISCONCEPTIONS.

KEY SCRIPTURE: “Beware lest anyone cheat you through philosophy and empty deceit, according to the tradition of men, according to the basic principles of the world, and not according to Christ.” Col 2:8 (NKJV)

Preparing to Teach the Lesson:

We have seen that the issue of creation vs. evolution is crucially important to Christians. But just because we want creation to be true doesn't mean that it is. We need to look at the scientific evidence to see whether it supports or contradicts creation, but we should also be aware of common misconceptions used to falsely support evolution.

Today's Aim:

We should not blindly accept every statement made in the name of science. At the conclusion of this lesson the students should recognize and be able to correct common misconceptions used to justify belief in evolution.

Introducing the Lesson:

In recent years there has been a carefully orchestrated attempt to persuade the public that science cannot possibly support creation, and that all serious scientists believe in evolution. This persuasion is accomplished through lying. Anyone who doubts evolution is portrayed as incompetent or superstitious. As a result, many people are under the impression that creationists have to ignore the mountains of scientific evidence that favor evolution. However, there are no such “mountains.”

Problems With Evidence.

Being aware of our own biases will help us to evaluate the evidence more objectively. However, it doesn't guarantee that the evidence itself is reliable. Remember that there are at least three potential problems to keep in mind.

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1. Evidence may be incomplete, withheld, or falsified.

CLEARING UP MISCONCEPTIONS.

Now that we have some tools to help us decide what is true or false, let's turn a corner and start examining some common beliefs that many people think prove evolution. They do not.

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2. Misconception #1: Creationists do not believe living things change.
NOT TRUE. Change is NOT the same thing as Evolution.

Evolutionists ridicule creationists by saying we deny that things change. This is ridiculous. Of course we believe in change. However,

3. Evolution requires change in the direction of **increasing** complexity (simple to complex);
Creation also expects change, but toward **decreasing** complexity (complex to simple).

4. Misconception #2: There is a trend toward self-organization throughout nature. NOT TRUE. Nature goes the **OPPOSITE** way.

According to evolution, there should be an overall trend toward increasing complexity not just in living things but throughout nature, that is, simple to complex. On the other hand, creation says that everything began at its best, that is, complex to simple. In this case there should be an overall trend in nature toward deterioration. So what do we actually find?

Decreasing Complexity.

5. Throughout nature, scientists have discovered a universal tendency toward **decreasing** organization and complexity, the 2nd Law of Thermodynamics.

It seems that scientists like to use big words like “Thermodynamics” so the average person will be too intimidated to ask questions. In order to understand the decreasing complexity in nature we need to define a few physics terms:

- *Thermodynamics* refers to the operation of heat energy. Since all energy tries to move in the direction of randomly distributed heat, thermodynamics applies at least indirectly to all types of energy.
- A *system* can be any collection of matter and energy around which we put an imaginary box. If neither matter nor energy can get in or out it is an *isolated* system; if energy can get in or out but matter cannot it is a *closed* system; if things can get in and out it is an *open* system.
- *Entropy* is a measure of the randomness and disorganization within any system.

The Second Law of Thermodynamics is probably the best documented principle in all of science. In the language of physics, it says that the entropy of an isolated system always increases. In other words, unless there is an outside influence the energy contained in a system (and everything that the energy holds together) tends to move away from a concentrated state, toward disorder and randomness.

Evolutionists respond that living things are open systems that receive energy from the sun. True, but that’s not what we’re talking about. Since evolutionists disallow any influence outside nature, they have to believe that the universe as a whole is a closed system. Throughout nature we see that the whole universe is deteriorating! This is precisely what we would expect if it was created in a condition of greater complexity than its present state.

6. In order for entropy to decrease in an open system, there must be:
- a. A supply of useful **energy** from outside the system. *A bomb contains a great deal of energy, but it’s not in a form useful to a baby.*
 - b. A **conversion** mechanism to use the energy properly. *Unless a baby has a digestive system to properly use the energy in its food, the food is useless.*
 - c. Pre-existing **information** to direct the way the energy is used. *No DNA = no growth.*
 - d. An energy source that will **increase** in entropy at least as much as the local system decreases.

Even if an outside influence brings about a temporary increase in organization in an open system such as a living thing, the best we can do is delay the process of

deterioration. For example, suppose we build a factory to assemble metal and plastic into automobiles. The finished product is more organized than the raw materials, but it won't last. Sooner or later the car will rust out and fall apart. The factory will eventually crumble too. The people who designed it will return to dust. The Second Law wins in the end.

It is crucial that there be a pre-existing source of information such as DNA to guide the growth of a living thing. Some evolutionists confuse information with order, saying that order spontaneously increases in places such as ice crystals.

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7. There is no more information in ice than in liquid water. The **structure** of the water molecules is always present, but it does not become visible until they link together into crystals.

There is a great deal of difference between randomness, order, and information. Suppose we take a group of letters arranged randomly:

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VTERABUTSHEOLHGFOEHNWYTEHTSVDHEAON TIEVHLSTEHIDVOA
VLDEHTUOIORSPGELORSBOHILED OERTONAT BOELIMSO
EAFRLINSTHENGNIHTVEGW

It doesn't mean anything. Now let's put them in alphabetical order:

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AAAAABBBDDDDDEEEEEEEEEEEEEEEEEEEFFGGGGHHHHHHHHHHHH
IIIIIIILLLLLLLMNNNNNNNOOOOOOOOOOOOPRRRRRRSSSSSSSS
TTTTTTTTTTTTUUVVVVVVWWY

It is more orderly, but it still doesn't mean anything. Now let's use these exact same letters but arrange them in a way which contains a great deal of information:

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FOR GOD SO LOVED THE WORLD THAT HE GAVE HIS ONLY
BEGOTTEN SON THAT WHOSOEVER BELIEVETH IN HIM
SHOULD NOT PERISH BUT HAVE EVERLASTING LIFE

Lots of difference between order and information!

Species vs. Genesis "Kinds"

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8. Misconception #3: Creationists believe every species is exactly the same as when it was created. NOT TRUE. A "**species**" is different from a Genesis "**kind**." A kind may include several species and possibly multiple genera. New species may appear within the limits of the Genesis kinds.

Evolutionists sometimes ridicule creationists by saying that we believe every species is exactly the same as it was since it was created. This is not true. Both creationists and evolutionists use the same system to classify living things and fossils.

- The highest level is the Kingdom. Some scientists classify living things into three kingdoms: animals, plants, and fungi. Others divide microscopic organisms known as protists and prokaryotes into separate kingdoms, for a total of five.
- The next division is the phylum. Each kingdom can contain many phyla, which may contain subphyla. (For example, animals with backbones belong to Phylum Chordata, Subphylum Vertebrata.)
- Next is the Class, which may contain subclasses.
- Next is the Order, which may contain suborders.
- Next is the Family, which may contain subfamilies.
- Next is the Genus, which may contain subgenera.

- Finally there is the Species, which may contain subspecies.

God did not give us a scientific definition of what He meant by the word “kind” in Genesis, but it is not the same as a species. Humans invented this classification to describe a group whose members can breed only with each other.

Selective breeding experiments on fruit flies illustrate the difference between kinds and species. After hundreds of generations of breeding, scientists have produced different groups of flies that come from the same ancestors but are no longer able to reproduce with each other. Because they are reproductively isolated, they are defined as different species. Despite the fact that new species have developed, nothing new has evolved. They started as fruit flies and remain fruit flies.

The variation is able to occur because every kind of living thing, from microbe to man, has its own variety of a substance known as DNA (deoxyribonucleic acid). This master molecule contains far more than just the number of genes needed to produce each kind’s body structures. It also contains many genes that may not be visibly expressed in the individual, but are available to be passed on to future generations.

In order to produce all the different varieties of living things, the DNA of the original created kinds of Genesis must have contained tremendous potential for variation. It was not necessary for any new genes to be added in order for the kind to diversify into species and breeds; they just became sorted out as time went on. New varieties developed as previously hidden genes became visibly expressed.

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9. Misconception #4: Creationists do not believe in “Descent with Modification.” NOT TRUE.

- a. Evolutionists believe that new features appear because of the accumulation of a great many beneficial mutations (copying mistakes during reproduction). There must have been a great deal of change for the **better**.
- b. Creationists believe that variation occurs only within the limits set by each kind’s DNA. Mutations damage DNA, so they should be harmful or at best neutral. Things change, but usually for the **worse**.

Evolution’s Only Hope: Copying Mistakes.

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10. Misconception #5: **Mutations** would furnish the raw material for evolution. NOT TRUE.

Because DNA is an extremely precise mechanism, creationists believe that accidental changes should damage it rather than improve it. While evolutionists admit that most mutations are harmful, they have no choice but to believe that a significant number through the eons have been beneficial, producing brand new genetic information and thus new features that conveyed an advantage to the mutated species. However, our observation of nature contradicts their belief.

A simple analogy shows why mutations are harmful. Using the 26 letters of our alphabet we can spell any sentence we want. Likewise, DNA is an information storage system composed of millions or billions of combinations of four special molecules represented by the letters A, C, G, and T. By using these molecules in different combinations DNA can spell out the instructions to produce any type of living thing.

Suppose we want to change the phrase “In the beginning God created” into the phrase “For God so loved the world.” Could we do it by changing one letter or space at

a time? Of course. However, let's add a reasonable restriction. Let's say that the sequence has to make sense every step of the way. Now how far will we get? Not very. We might be able to come up with a phrase that makes a little less sense (e.g., in the beginning God *cheated*), but before too long we will have a nonsense phrase and have to stop.

This corresponds to mutations in DNA. If we induce mutations in the normally functioning DNA of some animal or plant, we can only go so far before we have something that doesn't make biological sense. Instead of an evolving line of organisms we have a corpse. No further changes are possible.

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11. Most mutations are **harmful**. If they were not, evolutionists would be eager to build houses next to nuclear power plants so they could advance to the next stage of evolution.

There are a few mutations that have had no obvious ill effects on the affected individual (e.g. new colors of roses). These would correspond to minor changes in our "evolving" phrase above. However, these mutations have not conveyed any benefit to the species.

In some cases, a mutation may be helpful to an individual. For instance, the AnswersinGenesis.org web site describes the hypothetical example of a beetle on a windy island acquiring a mutation that would eliminate its ability to grow wings. That individual would be less susceptible to being blown off the island into the sea. However, genetic information has been eliminated rather than added. Besides, the mutation is only beneficial in special circumstances, and only to individuals. It decreases the species' overall ability to survive anywhere else except on windy islands.

12. There are a total of **zero** known mutations which are completely beneficial to the affected species. No mutations are known to increase genetic **information**.

In all of nature, we have seen very few mutations that seem to convey an advantage to individuals. However, evolution is supposed to happen to species, not individuals. The mutations do not help the species. In fact, they result from a LOSS of genetic information.

- One is a mutation in a tiny worm known as *C. elegans* that extends its life span. However, the mutation decreases the rate of reproduction, so it is questionable whether it benefits the species.
- Another is a mutation in human hemoglobin, the part of blood that carries oxygen. Because of a single change in DNA, the gene that produces hemoglobin changes this molecule from its normal round shape to a sickle shape. The individual becomes immune to malaria, but he gets sickle cell anemia. This is a painful and often fatal condition.

Even including these two mutations, there is NOT A SINGLE KNOWN MUTATION that increases the amount of genetic information in the affected species.

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13. The only known human mutation that conveys a benefit to an individual is sickle cell anemia, which makes him immune to **malaria** if he gets the gene from only one parent. However, if he gets the gene from both he will probably die from it.

Despite the fact that an individual with one sickle cell gene is immune to malaria, the immunity comes at a price. Malaria, though painful, can be cured; sickle cell cannot. Malaria does not damage the gene pool; sickle cell does. Sickle cell is far more harmful to the species than malaria is. Besides, the immunity is due to a LOSS of genetic information rather than a gain.

14. Even though a person with one sickle cell gene receives a slight benefit, the **species** suffers.

Evolution Requires More than Variation Within a Kind.

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15. Misconception #6: Evolution means simply that species change over time. NOT TRUE. Evolution requires the appearance of **new** types of animals and plants. The technical term for this is macroevolution. This is different from variation within a species, a common occurrence sometimes called microevolution.

No one would dispute the fact that selective breeding can bring about minor variation. For example, we can breed dogs to produce everything from Chihuahuas to Great Danes. This is variation within a kind, not evolution. Breeders don't create anything new, they just select features that are already present.

"Microevolution" is a deceptive term. It is not a case of new features evolving, but of existing genes in the DNA being visibly expressed as competing genes are eliminated. It would be more accurate to call it "microexpression" instead.

Evolution vs. Adaptation.

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16. Misconception #7: **Adaptation** to the environment is the same as evolution. NOT TRUE.

Some confuse evolution with adaptation, the ability of individuals or species to adapt to their environment. The two are emphatically NOT the same.

- **Evolution** requires that every so often, brand new structures such as eyes, wings, bones, and so on must appear for the first time. This would require the addition of brand new genes that never existed before to the gene pool.

17. **Adaptation** occurs when individuals change to fit their environment through **learned** behavior, or species change through the expression of already existing **genes**.

The newly expressed genes may include recessive ones that become expressed for the first time as dominant genes are lost.

In no known case of adaptation has there ever been an increase in genetic information.

Creation by an intelligent designer leads us to expect built-in potential to adapt to the environment.

How Would Evolution Work? The Giraffe Story.

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18. Misconception #8: Organisms can pass on characteristics acquired through use and disuse of body parts to their offspring. NOT TRUE.

If evolution were true, it would require the development of completely new structures such as eyes, ears, bones, and lungs. Ever since Darwin, evolutionists have been trying to figure out how such a thing might happen. An idea popular in his day was that characteristics acquired through use and disuse of body parts might be passed on to the next generation. For example, a French biologist named Lamarck said that perhaps giraffes acquired long necks by stretching them to reach high leaves when the food supply became scarce during times of drought. He believed that they would have then passed on the long necks to later generations.

After a century of experimentation, we know that use and disuse of body parts has no effect on offspring. For example, the tails were cut off 100 generations of mice but each new generation was born with tails. Besides, there is much more to the giraffe story.

- (1) Fossil sheep have been found alongside fossil giraffes. If there was a drought, the giraffes with short necks could have eaten grass like all the other animals that survived.
- (2) Adult male giraffes are one to two feet taller than adult females. In a competition for food, all the females would have starved to death and the species would have become extinct in one generation.
- (3) Mother giraffes stop nursing their babies while they are considerably shorter than adults. If only the high leaves were available, all the babies would have starved and the species would have become extinct.
- (4) There are no short-necked fossil giraffes.
- (5) Because its heart has to pump so hard to get blood up to its brain, a giraffe has very high blood pressure. Were it not for the intricate arrangement of blood control structures inside its neck, it would die of a stroke or aneurysm the first time it bent down to take a drink of water. (Details can be found in *Of Pandas and People* by Davis, Kenyon, and Thaxton, Houghton Publishing Co., Dallas, 1989, pp. 69-71.)

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- The first safeguard is in the neck arteries. Each of them is surrounded by muscles. When the giraffe bends down, pressure sensors in the arteries notify the muscles to contract and reduce the blood flow.
- Second, there is a series of one-way valves in the neck veins that keep the blood from flowing the wrong way because of gravity as the giraffe bends down.
- Third, at the base of the brain is a network of tiny blood vessels known as the *rete mirabile* ("marvelous net"). When the giraffe bends down, much of the blood flow is diverted into this network to relieve the pressure. When it raises its head again, normal blood flow resumes.

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Use and disuse of body parts cannot explain the giraffe's long neck, much less the elaborate internal structures. These are present because they are programmed into the animal's DNA.

19. A characteristic acquired through use and disuse of body parts is / **is not** passed on to offspring.

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20. Giraffes have long necks not because their ancestors stretched them, but because their **DNA** contains the information to produce the long necks.

Selective Breeding

21. Misconception #9: Selective breeding shows how evolution would happen. NOT TRUE. Selective breeding does not add anything **new**.

Selective breeding works by the elimination of undesired genes. For example, suppose we find that crossbreeding a certain variety of rose bushes produces red roses about three fourths of the time, and yellow the other one fourth. Based on discoveries of genetics over the past hundred fifty years or so, we could conclude that there is probably a combination of dominant (red) and recessive (yellow) genes present in the roses. Any time a new rose inherits at least one dominant gene, it visibly expresses that gene whether the recessive gene is present or not.

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We can use this reasoning to produce a new variety of exclusively yellow roses. In the first generation we crossbreed a pair of bushes, then select one of the yellow offspring to breed with a red one that we hope has both the dominant and recessive genes. If we guessed correctly, we should get about half yellow and half red roses from the second generation of crossbreeding. If we deliberately crossbreed only the yellow ones from the third generation onward, we should get only yellow roses.

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No new genes were created. We achieved the desired results by eliminating undesired genes rather than producing new ones.

22. Selective breeding does not produce any new features. It only emphasizes features that are already **present**.¹¹⁻¹³

For instance, starting in 1800 breeders in France attempted to raise the percentage of sugar in beets from the natural amount of six percent. By 1878 they were able to increase it to seventeen percent. Since then, no further increase has been possible. Likewise, we have been able to breed cows to increase the amount of milk, chickens to increase the amount of meat, etc. However, this is a minor change in previously existing features, not evolution. Besides, the breeding benefits us rather than the affected plants or animals.

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- (1) We do selective breeding for our benefit, not that of the animals or plants being bred. The farther we breed them from their natural condition, the less able they are to survive on their own. For example, chickens have been bred to reach frying size five weeks after hatching. However, they have very weak hearts and are extremely stupid.
- (2) If selective breeding is discontinued and the subjects are allowed to freely interbreed again, the group moves back toward its original condition in a few generations.
- (3) In every case we soon reach a limit beyond which no further change is possible.

23. The farther selective breeding takes a group of animals or plants from its natural condition, the (better / **worse**) it is for that group.

Natural Selection: The Peppered Moth.

24. Misconception #10: The Peppered **Moth** is an example of evolution in action in the world today. NOT TRUE.

Evolutionists give one example of “evolution in action,” the peppered moth. This species (*Biston betularia*) lives around Liverpool, England in light and dark varieties. Before the industrial revolution, the trees in the area were light in color. This made it hard for birds to see the light moths resting on the trees, but easy to spot the dark ones. Most dark moths were quickly eaten, victims of natural selection. The light moths which escaped comprised the vast majority of the moth population.

When the industrial revolution got under way and factories began to belch out smoke, soot began to accumulate on the trees. Adding to the effect, the soot also killed off the light-colored lichen that had previously covered the trees. Now it was easier for the dark moths to survive because they blended with the new dark background. Soon the percentage of dark moths was far greater than that of the light ones. Is this a case of evolution? Not at all. The moth population began with light and dark varieties; it ended with light and dark varieties. In addition, in later years a pollution cleanup campaign in the area made the trees begin to get lighter again. As they lightened, the percentage of light moths moved back toward its beginning level.

The peppered moth is an excellent example of natural selection, but it has nothing to do with the evolution of a new kind of creature. Nothing new was added.

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25. The “peppered moth” is an excellent example of natural **selection**, but nothing has evolved.

You can illustrate natural selection and the peppered moth by making two large cutouts in the shape of moths, one out of black construction paper and the other out of white. Hold the two against a white background and ask the students which would be easier for birds to see and eat. Repeat the demonstration against a black background. The students will be able to see for themselves how natural selection operates.

“Vestigial Organs.”

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26. Misconception #11: The human body contains many **vestigial** organs left over from earlier stages in our evolution. NOT TRUE.

If new structures evolve as old ones fade away (e.g., legs replace fins, lungs replace gills), at least a few types of animals and plants should have some developing or *nascent* organs that have not yet achieved full function. Likewise, there should be some *vestigial* organs, evolutionary vestiges that have lost their function. On the other hand, if creation is correct there should be no nascent organs. There might be a few organs that have lost their function through accumulated mutations in the human gene pool, but this would demonstrate deterioration rather than evolution.

Creation is correct in both cases. There is not a single known nascent organ in any type of living thing. Nor are there undisputed examples of vestigial organs. One of the most commonly cited instances, the “vestigial legs” in whales, are not legs at all. They are different in males and females, and are used to hold the proper position during mating. Since they have a use, they are not evolutionary vestiges at all.

But what about well-know examples in humans such as the tonsils and appendix? In the late 1800’s a German biologist named Wedersheim compiled a list (referred to in the famous “Scopes Trial”) of 180 structures in the human body that had no known function and were supposed to be vestigial.

27. Evolutionists used to think that the human body contained about **180** “vestigial” organs which had no function. They were wrong. We now know the function of all but about six. For instance, the tonsils and appendix help fight infection, especially in infants.

If an organ has a function at any time during life, it is not vestigial. The tonsils and appendix help fight infection, especially during infancy. (Yes, we can live without them, but we can also live without arms, legs, or eyes. Are they vestigial?) The “tailbone” is not a tail but the anchoring point for the pelvic muscles. Many of the glands formerly thought to be vestigial are now known to produce important hormones.

Because evolutionists of the late 1800’s did not know the function of these structures, they decided there was no function. This shows nothing more than the arrogance of the evolutionists. It also shows the ignorance of those who still accept this false argument for evolution.

Embryonic Recapitulation.

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28. Misconception #12: Like other species, human **embryos** go through all the stages of evolution. NOT TRUE.

Though professional scientists know better, many people still believe that the embryo shows all the stages of evolutionary development before birth. Remember from the last lesson that Ernst Haeckel was the single individual who did the most to spread this belief throughout Europe in the late 1800’s. He was convicted of fraud by a university court of his peers shortly after the turn of the century. Nevertheless, his lie has persisted to this day.

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29. Despite what you might have heard in biology class, a human baby does not go through the stages of **evolution** before birth. The “tailbone” is the anchoring point for the pelvic muscles; the “yolk sac” contains blood, not yolk; and the “gill slits” are neither gills nor slits. They are pouches which house several glands, as well as the middle ear canals.

Babies with “tails.”

What about the occasional news reports of a baby born with a tail? Are these evolutionary throwbacks?

30. In every case where a baby was supposedly born with a tail, the “tail” was nothing but a fatty **tumor**.

In no case has a baby’s “tail” contained bone. Every one of them has been nothing but a fatty tumor. These can occur anywhere on the body. If a fatty tumor near the base of the spine means our ancestors had tails there, does a tumor on the neck mean there was a tail there too? Of course not. Only the ones that seem to favor evolution make the news.

Think about this, too: the apes that are supposed to be our closest relatives (chimps and gorillas) don’t have tails, so why should we?

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31. Correcting these false ideas does not prove creation, but it shows that most people’s belief in evolution is based on **faith**, not evidence.

Now that we've eliminated some false evidence, we will begin next time to look at the scientific arguments for creation and against evolution.

LESSON REVIEW:

- Change is not the same as evolution.
- Evolution requires change in the direction of increasing complexity (simple to complex).
- Creation leads us to expect change in the direction of decreasing complexity (complex to simple).
- Nature tends to go from complex to simple, just as creation predicts.
- Increased order when crystals such as ice form is not an increase of information.
- The “kinds” of Genesis contained enough genetic information in their DNA to diversify into multiple species.
- Both evolutionists and creationists accept the concept of descent with modification. Evolutionists believe there have been countless beneficial mutations. Creationists believe change can occur with the limits of the kinds, but mutations should be harmful.
- A few mutations may help individuals, but no known mutations are completely beneficial to the affected species.
- No known mutations add genetic information to DNA. They damage it instead.
- Evolution requires the appearance of brand new structures such as eyes, ears, wings, lungs and countless others. This is much more than variation within a kind. It requires brand new genes.
- Adaptation is much different from evolution. Species can adapt to their environment through expression of already present recessive genes. Individuals can adapt through learned behavior.
- Characteristics acquired through use and disuse of body parts are not passed on to offspring.
- Selective breeding does not produce any new features. It only emphasizes features that are already present.
- The farther animals and plants are bred from their natural condition, the harder time they have surviving.
- The Peppered Moth is an excellent example of natural selection, but it is not evolution. No new genes or features were produced.
- Evolutionists once believed that there were about 180 vestigial organs in the human body. A function is now known for almost every one.
- Neither human embryos nor any other kind go through all the stages of evolution during their development.

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