**The “Neolithic Revolution”**

**Chronology of the “Neolithic Revolution”:**

The Neolithic revolution took place in several stages. First, people settled down in permanent communities (“sedentism”), and afterwards they developed food production.

**Paleolithic** – before 10,000 BCE – nomadic hunter-gathers of the Pleistocene (Ice Age)
**Epipaleolithic** – Natufian Culture ca. 10,000-8300 BCE – sedentary hunter-gatherers
**Pre-Pottery Neolithic A (PPNA)** – 8300-7500 BCE – domestication of wheat, barley
**Pre-Pottery Neolithic B (PPNB)** – 7500-6000 BCE – domesticated sheep, goats, cattle, pigs



[Epipaleolithic Pit Houses at Abu Hureya](http://teachmiddleeast.lib.uchicago.edu/foundations/origins-of-civilization/image-resource-bank/image-06.html)

Once people had developed a village farming system based on both domesticated plants and animals, the Neolithic economy spread across the Middle East.

**The Environmental Context of the Neolithic “Revolution”**

During the Pleistocene, climatic conditions in the Middle East were much colder and drier than they are today.  However, at the beginning of the Holocene, the Middle Eastern climate became warmer and wetter, so that by 9000 BCE, conditions were actually milder and better than today.



[Comparison of Wild and Domesticated Goats](http://teachmiddleeast.lib.uchicago.edu/foundations/origins-of-civilization/image-resource-bank/image-04.html)

Forests of oak and pistachio spread widely along the eastern Mediterranean coast, while further inland, the grassland steppes filled with gazelles, deer, wild cattle, wild goats, and onagers (wild donkeys). The coastal zone was the richest environment, supporting abundant game and wild cereals, such as wheat and barley.

**The Epipaleolithic Period and the Natufian Culture of the Levant (10,000–8300 BCE)**



[Wild and Domesticated Cereals](http://teachmiddleeast.lib.uchicago.edu/foundations/origins-of-civilization/image-resource-bank/image-02.html)

The newly abundant plant resources and wild game in the Mediterranean coastal zone attracted hunter-gatherer groups to the region. In some areas, the stands of wild wheat and barley were so large and rich that the hunter-gatherers were able to give up their nomadic way of life and establish small permanent base camps in these “optimal zones”. Archaeologists refer to these groups as the Natufian Culture (ca. 10,000-8,300 BCE). The round pit-houses in Natufian settlements at Jericho and Abu Hureyra are some of the world’s earliest known villages. In contrast to the earlier mobile hunter-gatherers of the Ice Age, the Natufians were sedentary hunter-gatherers who focused their diet very intensively on collecting wild wheat and barley, and on the hunting of gazelles and deer. Because the Natufians were becoming increasingly dependent wild cereals, they developed new technologies to harvest grain – flint sickles set into wood or bone handles, and storage pits to insure that their wild harvest would last throughout the year. With a reliable supply of wild cereals and abundant game, the populations of these newly sedentary villages began to grow, increasing the pressure on their resource base.

**Environmental Stresses and the Beginnings of Domestication:**

By about 9000 BCE, the optimal climatic conditions of the Early Holocene underwent a climatic fluctuation called the “Younger Dryas” characterized by cooler and drier conditions in the Levant. These changes would have decreased the yields of the wild wheat and barley resources that the Natufians relied on so heavily for their food supply. When the Natufians started to settle in villages, the population grew and the range of their food resources narrowed. As a result, the environmental stresses of the Younger Dryas meant that the Natufians would have had more mouths to feed than ever before and less food to feed them.



[Jericho (Tell Es-Sultan)](http://teachmiddleeast.lib.uchicago.edu/foundations/origins-of-civilization/essay/image-14.html)

The Natufians seem to have reacted to these resource stresses in two different ways. In the more marginal steppe-grassland regions of the Levant, people gave up sedentism and returned to a more mobile hunter-gatherer lifestyle. In better watered areas closer to the Mediterranean, or in oases (such as Jericho) the Natufians chose to remain sedentary, dealing with the resource stress by intensifying their care of wild plant resources through watering, selective breeding, and saving the most desirable seeds from one year to the next. These actions selected for larger, more reliable, more nutritious plants that were also easier to harvest and process, leading to the emergence of cereal domestication.  With the emergence of plant domestication, we pass from the “Epipaleolithic” period and the Natufian culture into the Early Neolithic period.

**The Aceramic (“Pre-Pottery”) Neolithic Cultures of the Middle East**

Archaeologists usually divide the Early Neolithic of the Levant into two stages:

**1. Pre-Pottery Neolithic A or PPNA** phase (ca. 8300-7500 BCE), when plants were domesticated, and

**2. Pre-Pottery Neolithic B or PPNB** phase (ca. 7500-6000 BCE), when domesticated animals came into widespread use alongside the already-domesticated crops.

**Pre-Pottery Neolithic A (PPNA): ca. 8300-7500 BCE**During the Pre-Pottery Neolithic A (PPNA) period, the first domesticates were plants: cereals and legumes such as wheat, barley, chickpeas, lentils, and peas; at sites such as Tell Aswad, archaeologists have recovered domesticated wheat and barley that have been radiocarbon dated to about 8300 BCE.  Domesticated plants were just one part of a mix of food resources that still relied heavily on wild plants and the hunting of wild animals. Relatively few PPNA sites are known; some of our best information about this period comes from Jericho, an oasis in the Jordan River valley.

Jericho has a smooth transition from the earlier Natufian occupation into the PPNA. PPNA Jericho was 4 hectares in size (1 hectare = 100x100 meters) with an estimated population of about 200 people living in round/oval houses constructed of mud brick. The settlement was surrounded by a ditch and a wall, and had a 9-meter tall stone tower – the earliest known building of this kind. The inhabitants of Jericho used flint tools, but also engaged in long-distance trade to acquire obsidian (natural volcanic glass) from sources over 1000 km to the north in the mountains of Anatolia (Turkey).

**Pre-Pottery Neolithic B (PPNB): ca. 7500-6000 BCE**
The two most important developments of the Pre-Pottery Neolithic B (PPNB) period are a) the domestication of animals, and b) the spread of food-producing communities in large numbers across the Middle East.

The main animals domesticated in the PPNB period were sheep, goats, cattle, and pigs. The earliest solid evidence for animal domestication comes from western Iran, at sites such as Ali Kosh. The idea of animal domestication probably spread westward from Iran into the Levant, where it was adopted by PPNB communities. The PPNB villages had a very well balanced and diversified economy that combined farming of domesticated crops with gathering wild plants, herding domesticated animals, and some hunting. Most PPNB villages also had domesticated emmer wheat and barley, along with legumes such as peas, chickpeas, and lentils. PPNB villages had rectangular, multi-roomed mudbrick houses with plastered floors. PPNB houses were larger than the earlier PPNA oval houses, and sometimes had two stories – suggesting that family size had increased as well.



[Jericho Plastered Skull](http://teachmiddleeast.lib.uchicago.edu/foundations/origins-of-civilization/essay/image-09.html)

The PPNB provides our best evidence for the development of new religious beliefs across the Levant. At Jericho and other sites, archaeologists found plastered skulls buried in pits beneath the house floors. After the bodies had decomposed, the skulls were removed, plastered, and were molded with noses, ears, and shells for eyes. The skulls were then reburied, and periodically removed for use in religious rituals. PPNB communities also used life-sized carved limestone masks with human faces and large painted clay sculptures in their rites. The plastered skulls, sculptures, and masks may reflect the existence of an "ancestor cult" connected with the development of agriculture. Agriculturalists often have a high sense of territoriality, since the land they farm is their single most important resource. They justify their access to and control over this land through an ancestor cult. Practices such as burial beneath house floors, saving the skulls of one’s ancestors, and “consulting” with the ancestors in rituals - all emphasize that the land has belonged to its owners and their family "since time began."

PPNB communities shared similar styles of artifacts, and maintained connections of trade and ritual practices over a broad area. They continued to use the earlier PPNA trade networks to obtain obsidian from Anatolia, and shell from the Red Sea coast. PPNB settlements were larger and much more numerous than the earlier PPNA communities. The relatively rapid spread of PPNB villages suggests that the combination of domesticated plants and animals gave farmers a very productive and reliable food supply that was diversified enough to withstand all but the worst environmental stresses.

**Neolithic Foundations for the Rise of Urban civilization**

The emergence and spread of food production by 6000 BCE across the Middle East established the social and economic foundations for the emergence of urban civilization. Farming and herding produced enough surplus food to support craft specialists, priests, and political leaders. The production of large-scale food surpluses also led to the emergence of economic inequalities as some farmers became wealthier than others and were able to pass their wealth along to their children. By 5500 BCE, we can see clear evidence for the emergence of towns – large settlements surrounded by satellite villages under their control. These towns served as both temple centers for religion, and as political centers for newly emerging chiefly leaders. By 3800 BCE, these temple towns in Mesopotamia had accumulated enough wealth, power, and population that we can rightly identify them as the world’s first cities.