Teacher Guide for Hatching

Iowa State University
Extension and Outreach

Welcome to Classroom Hatching

The contact information for my local Extension Staff or Ag in the Classroom Coordinator is:

_____

A copy of the users manual for the incubator housed in my classroom can be found at:

_____

I am to add water to the incubator in my classroom when:

_____

Each day please read from the Teacher Calendar to your students what is happening inside the eggs. As a class keep count of which day of development it is.

Each day please open or have a student open a plastic/model egg to see a picture of what is happening inside the eggs.

Guide your students through activities in the student workbook as time allows for Cross Curricular Connection during hatching.

Make sure to post signs by the incubator in your classroom and notify janitorial staff not to unplug them.

Have your students predict how many eggs will hatch. This is a good way to start the conversation or soften the fact that not all the eggs in your room may successfully become chicks. You may share that some eggs are laid with something wrong that causes them not to grow and that even eggs can get sick or become unhealthy and have a hard time.

Hatching FAQ

What should I do if an alarm goes off on my incubator?

Refer to the incubator manual or contact your local Extension and Outreach Staff.

The power has gone off, how long will the eggs be okay?

Eggs should be okay for an hour. A brief cooling period is natural similar to when a mother hen leaves the nest to eat. Additional cooling or time without power can delay hatching date and percentage of eggs hatched. Contact your Extension and Outreach partner.

Some eggs cracked but now it has been hours since we have seen progress toward hatching, is this normal?

Yes. After making a hole in the shell it is natural for the chick to rest for a few hours while its lungs are adjusting to the air.

Should I help a chick hatch if it seems to have trouble getting out of its shell?

No. if a chick has not fully emerged on its own there is usually a reason. Trying to help a chick could cause infection or cripple the chick.

How long should I leave a chick in the incubator?

Leave a hatched chick in the incubator until it appears fluffy and dry, up to 24 hours is okay. Humidity level in the incubator is critical during hatching, you should avoid opening the incubator as much as possible until all eggs have hatched.

Will the wet chick be okay in the incubator without food or water?

Yes for 24 hours.

Sample Classroom Hatching Program Agreement

ISUEO _____ **County agrees to:**

Provide the hatching kit to your classroom:

- Incubator and supplies including 7 fertilized eggs.
- Tote with student workbooks, activities, etc.
- Small cage, feeder, waterer, heat lamp, feed, and shavings for chicks after hatching.

Work with assigned classroom teacher to schedule 4 classroom visits during the 4 week hatching program.

1. Introduction and Set Up
2. Parts and Functions
3. New Needs
4. Excellent Eggs

Be responsible for finding a safe home for hatched chicks after completion of the hatching program.

Provide teacher support and assistance with hatching.

_____ **School District and** _____ **classroom teacher(s) agree to:**

Participate in the 4 week hatching program including 4 classroom visits by ISUEO.

- Approximate dates: _____, _____, _____, _____.

Provide a safe space for a small incubator and cage following hatching.

Provide water, feed (included), and care for chicks up to 5 days after they hatch.

Work with ISUEO to schedule classroom visits through the course of the program

- Lead contact person for your school is: _____

Return the non-consumable kit items in good condition-replace incubator/kit ($_____) if damaged beyond normal wear and tear.

Kit will be collected at last classroom visit when chicks are also removed from classroom.

Signed by _____ Date: _____
(School contact person)

Signed by _____ Date: _____

Teacher Calendar

Day 1	Day 2	Day 3	Day 4	Day 5
An embryo starts to form on the yolk. *Crouch down into an egg, wrap your arms around your legs.*	Blood vessels start to form. *Inside your egg, find the veins on your wrist and trace them with your finger.*	The heart starts beating. *Gently pat your hand on your chest to make the sound of a heart beat.*	Tongue and eyes begin to form. *Stick out your tongue inside of your egg.*	Elbows and knees appear. *Stay squatting, stick out your elbows and knees.*
Day 6	**Day 7**	**Day 8**	**Day 9**	**Day 10**
Beak begins to form. Tiny movements begin. *Hold your hand in front of your mouth in the shape of a beak.*	Comb growth begins. *Place a hand on top of your head, fingers pointing upward.*	Feathers are forming. *Point to a piece of clothing that keeps you warm instead of feathers.*	Mouth opening appears. *Open and close your mouth two time. One, two.*	Toe nails develop. *Inside your egg, wiggle your toe nails.*
Day 11	**Day 12**	**Day 13**	**Day 14**	**Day 15**
Tail forms. *Wiggle your tail area.*	First few feathers can be seen. *Shake your body to ruffle your new feathers.*	Scaly skin appears. *Feel your skin and pretend it is tough and scaly.*	Embryo moves head to big side of the egg. *Inside your egg, tilt your head to the side.*	Embryo has a tummy inside. *Take one hand and rub your tummy.*
Day 16	**Day 17**	**Day 18**	**Day 19**	**Day 20**
Feathers cover entire body. *Shake your body again to ruffle your feathers.*	Less fluid in the egg. *Grow bigger in your egg by arching your back.*	Embryo is almost done growing. *Grow bigger by sticking out your elbows.*	Embryo takes up most of the space in the egg. *Grow bigger by spreading your feet apart.*	Embryo starts breathing air. It is now a chick. *Take a deep breath on the count of 3. One, two, three!*
Day 21				
Chick is ready to hatch. *Stand up to hatch out of your egg, and on the count of 3 give me two big "Cheep, cheeps!"*				

Read the BLACK text to update students on a change happening each day inside the egg.

Read the BLUE text to have students quietly act out changes inside of the egg. Start by saying the number of the day, reading the fact in black and then having students repeat the action in blue. This activity is a great brain break for your classroom.

Classroom Hatching Vocabulary

Hatching: the action of an egg opening to produce a young animal

Hatching Egg: a reproducing egg capable of becoming a chick

Incubator: machine that keeps eggs warm to develop

Developing: process of growing

Shell: hard protective coat on the outside of an egg

Candling: testing an egg with light to see if it is growing

Needs: something you have to have to live

Embryo: unborn offspring, or baby developing inside something

Yolk: yellow inside of an egg where embryo forms, nutrients for growing embryo

Nutrient: thing needed to grow and stay alive

Vessel: tubes inside a body that carry liquid (blood vessel)

Comb: fleshy growth on top of the head of a chicken

Beak: hard pointed part of a bird's mouth

Scaly: tough dry skin

Hen: adult female chicken, mamma bird

Chick: baby chicken that breathes air

Heat Lamp: bulb that gives heat

Cooking Egg: a egg that is not able to become a chick

Protein: something needed to grow muscle and tissue

Parts & Functions

Toes/Claws: Toes/Claws are for or digging. Chickens use their toes to dig in the dirt and find insects and worms to eat.

Spur: Spurs are for protecting. Chickens use their spurs (a long claw on the back of the leg) for defense.

Feathers: Feathers are for warmth. Feathers help to keep the bird warm. They also can be used for looks, males often have brighter feathers than the females. Long tail feathers and the fluffing of feathers can even help a bird to appear larger to its predators.

Beak/Egg Tooth: Beaks are for pecking. Chickens use their beaks to peck at food. Baby chicks have a curved portion, or egg tooth on the end of their beaks that they use to break open their shell and hatch. The egg tooth goes away as the chick grows.

Comb/Wattle: Combs are for temperature control. To control our body temperature we sweat. Chickens are unique because they have extra areas of flesh called combs and wattles that help to regulate their body temperature.

Wings: Wings are for flapping. Chickens flap their wings to appear bigger and scarier to their predators. They also use them to fly up to high points to roost where they can keep watch over the flock or look out for threats.

Notes

Please do not touch or unplug! Thank you.

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Iowa 4-H

4-H Youth Development Building

1259 Stange Road

Ames IA 50011

Written in 2022 by Hannah Dibble, Dickinson County K-12 Educator, and Dr. Amy Powell, 4-H Animal Science Program Specialist, Iowa State University Extension and Outreach.

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