Title	Topics	Description	Equipment	Cost	Link	Author	Age Range	Notes
Iridescent AI Family Challenge	Data collection, design thinking, classification, emotion detecting, science communication	Build CS and AI skills to identify a problem in your community and build an AI solution. Three stages with multiple modules each		Free	https://www.curiositymachine.org/challenges/iridescent-ai-family-challenge-21-lesson-plan-1	Iridescent Learning	8-15	Three stages, targeted at family learning
Nvidia DIGITS	Deep learning, neural networks,	Slides and assessments. 6		Free	http://developer.nvidia.		13-14	Assessments
Calypso for Cozmo	Computational thinking, computer vision, speech recognition, and artificial intelligence, robotics, teleoperation, state machines, facial recognition	Robot and visual programming language kit w/ desktop, laptop, or tablet. 12 modules total		$14.95	https://calypso.software/		All ages	
Apps for Good - ML	Machine learning, data collection, training, testing, chatbots, recommendation systems, neural networks, bayesian, self driving cars, bias, decision tree, k-means, teamwork, design, communication				https://www.appsforgood.org/courses/a-journey-learning		Primary, Secondary, FE	10-12 hours
AI in a Box	Facial recognition, visual recognition, object manipulation, landmark-based navigation, speech generation, speech recognition			$399-2999	https://www.readyai.org/readyai-youtub-in-a-box/	ReadyAI	Middle and High School	

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Harvard Scratch Teaser	Chatbots	Students explore chatbots and then use Scratch to build their own	Free		http://scratched.seas.harvard.edu/sites/default/files/a_teaser_0.pdf	Sarah Fillman and Susan Evans			
CSforALL AI	Intelligence, human intelligence, learning, machine learning, Turing Test, natural language processing, chatbots, robots	Students discuss human vs machine intelligence, engage with chatbots, and form simple model of intelligence	Free		https://csforall.org/teacher-resources/teacher-lesson-plan-19-ai-robots		6th-9th grade		
Machine Learning for Kids	Text, image, and number recognition	Various step by step machine learning projects using Scratch, App Inventor, and Python, with IBM Watson	Free		https://machinelearningforkids.co.uk/#!/projects	Dale Lane	All ages		
CS Unplugged	Human vs machine intelligence, tic tac toe	Students play variations of tic tac toe to understand how formal instructions can inform intelligence	Free	A whiteboard or flipchart to write on (so all can see 2 flip charts / whiteboard pens A copy of the intelligent piece of paper (possibly laminated) A Hallmark musical card that plays some appropriately horrible song recognizable by the age group. (optional)	https://csunplugged.org/artificial-intelligence/		8+		

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Machine Learning for Middle Schoolers			Free	http://blog.stephenwolfram.com/2017/05/machine-learning-for-middle-schoolers		11-14	2017	
The Complete Guide to Artificial Intelligence for Kids			$12.95	https://store.mathfolds.com/collections/frontpage/products/the-complete-guide-to-artificial-intelligence-for-kids	Michael Milford	4-12	2018	

Title	Topics	Description	Cost	Equipment	Link	Author	Age Range	Year	Notes
Google AI Experiments			Free	Chrome	https://experiments.withgoogle.com/collections/ai			14	
App Inventor				Android device recommended	appinventor.mit.edu			12	
Cozmo Codelab			$179.99		https://www.anki.com/en-us/cozmo/code-lab/constructor-mode			8	
AIY			$49.99-89.99		https://aiyprojects.withgoogle.com/			14	
TensorFlow Playground					https://playground.tensorflow.org/			16	
Cognimates Studio					https://mitmedialab.github.io/cognimates-website/about/			7-10	
Be a Maker for Jibo				Jibo	https://www.jibo.com/be-a-maker/		8		
Google What If				Chrome	https://pair-code.github.io/what-if-tool/				
ECraft 2 Learn AI					https://ecraft2learn.github.io/ai/			14	

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Envisioning AI for K-12: What should every child know about AI?		Describes "5 big ideas in AI" and links to resources in AI	Envisioning AI for K-12: What should every child know about AI?	David Touretzky, Christina Gardner-McCune, Fred Martin, Deborah Seehorn	K12	2019	
CSTA K12 CS Standards			https://www.csteachers.org/page/standards		K12		